THE FLEDGLING

CHARLES BERNARD NORDHOFF

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By

CHARLES BERNARD NORDHOFF

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THE FLEDGLING

I

A WATCHER OF THE SKIES

January 22, 1917

We were put on active duty at the front about the first of the year; in fact, I spent New Year's night in a dugout within pistol-shot of the Germans. It was quite a celebration, as the French Government had provided champagne, cakes, and oranges for all, and every one was feeling in a cheery mood. When dinner was over, each of us chipped in his day's ration of army wine (about a pint), and with a little brandy, some oranges, sugar, and a packet of spices I had been commissioned to get, we brewed a magnificent bowl of hot punch, or mulled wine. First "The Day of Victory" was toasted, then, "France"; then, with typical French consideration,

"The United States." After that, each man's family at home received a health; so you may be interested to know that your health and happiness for 1917 were drunk in a first-class abri by a crowd of first-class fellows, as all French soldiers are.

The next day was a typical one, so I will sketch it for you, to give an idea of how we live and what we do. When the party broke up it was late, so we turned in at once, in a deep strong dugout, which is safe against anything short of a direct hit by a very heavy shell. Once or twice, as I dropped off to sleep, I thought I heard furtive scamperings and gnawings, but all was quiet until just before daybreak, when we were awakened by a terrifying scream from a small and inoffensive soldier who does clerical work in the office of the médecin chef. The poor fellow has a horror of rats, and usually sleeps with head and toes tightly bundled up. I flashed on my elec-

tric torch at the first scream and caught a glimpse of an enormous rat — fully the size of a small fox terrier, I assure you! — streaking it for his hole. The next minute I made out the unfortunate little soldier holding with both hands one ear, from which the nocturnal visitor had bitten a large mouthful, while he did a frantic dance around the floor. First came a titter, then a choked laugh, and finally the whole dugout howled with uncontrollable mirth, until the victim wound on his puttees and stalked out, much offended, to get some iodine for his ear.

As we had laughed ourselves wide awake, I passed around some cigarettes, while another fellow went down for a pot of coffee. Dressing consists of putting on one's shoes, puttees, and tunic — when I feel particularly sybaritic I take off my necktie at night.

For once the sun came up in a clear blue sky and shone down frostily on a clean

white world — a metre of snow on the ground, and pines like Christmas trees. It was wonderfully still: far away on a hillside some one was chopping wood, and beyond the German lines I could hear a cock crow. After stopping to ask the telephonist if there were any calls, I took towel and soap and tooth-brush and walked to the watering trough, where a stream of icy water runs constantly. As I strolled back, a thumping explosion came from the trenches — some enthusiast had tossed a grenade across as a New Year's greeting to the Boche. Retaliatory thumps followed, and suddenly a machine-gun burst out with its abrupt stutter. Louder and louder grew the racket as gusts of firing swept up and down the lines, until a battery of 75's took a hand from the hills half a mile behind us. *Crack-whang-crack*, they went, like the snapping of some enormous whip, and I could hear their shells whine viciously overhead.

An orderly appeared shortly, to inform me that I must make ready to take out a few wounded. My load consisted of one poor fellow on a stretcher, still and invisible under his swathing of blankets, and two very lively chaps, — each with a leg smashed, but able to sit up and talk at a great rate. We offered them stretchers, but they were refused with gay contempt. They hopped forward to their seats, smiling and nodding good-bye to the stretcher-bearers. Despite my efforts one of them bumped his wounded leg and a little involuntary gasp escaped him. "Ça pique, mon vieux," he explained apologetically; "mais ça ne fait rien — allez!"

At the hospital, several miles back, there was the usual wait for papers, and as I handed cigarettes to my two plucky passengers, I explained that hospital book-keeping was tiresome but necessary. Suddenly the blood-stained blankets on the stretcher moved and a pale, but calm

and quizzical face looked up into mine: "Oh, là là! C'est une guerre de papier; donnez-moi une cigarette!" You can't down men of this caliber.

Just before bedtime another call came from a dressing-station at the extreme front. It was a thick night, snowing heavily, and black as ink, and I had to drive three kilometres, without light of any kind, over a narrow winding road crowded with traffic of every description. How one does it I can scarcely say. War seems to consist in doing the impossible by a series of apparent miracles. Ears and eyes must be connected in some way. Driving in pitchy blackness, straining every sense and calling every nerve to aid one's eyes, it seems that vision is impaired if ears are covered.

At the posts, just behind the lines, where one waits for wounded to come in from the trenches, I spend idle hours, chatting or playing dominoes. Our little circle comprises a remarkable variety of

types: one hears French of every patois, from the half-Spanish drawl of the Mediterranean to the clipped negatives and throaty *r* of Paris.

As inventors of racy slang we Americans are miles behind the French. Your pipe is "Mélanie" (also your sweetheart, for some unknown reason). One's mess is "la popote," a shrapnel helmet is a "casserole," a machine-gun is a "moulin à café." Bed is ironically called "plumard"; and when a bursting shell sends out its spray of buzzing steel, the cry is "Attention aux mouches!" [Look out for the flies!] Government tobacco is known, aptly, as "foin" [hay]. If one wants a cigarette, and has a paper but no tobacco, one extends the paper toward a better-provided friend saying, "Kindly sign this." And so on.

February 18

I had an interesting day yesterday. The commandant asked for a car — he is the

head medical officer — to visit some posts, and I was lucky enough to land the job. He is a charming, cultivated man, and made it very pleasant for his chauffeur. We visited a number of posts, inspecting new dugout emergency hospitals, and vaccinating the stretcher-bearers against typhoid — a most amusing process, as these middle-aged fellows have the same horror of a doctor that a child has of a dentist. Reluctant was scarcely the word.

Finally we left the car (at the invitation of the artillery officer) and walked a couple of miles through the woods to see a new observation post. The last few hundred yards we made at a sneaking walk, talking only in whispers, till we came to a ladder that led up into the thick green of a pine tree. One after another the officers went up, and at length the gunner beckoned me to climb. Hidden away like a bird's nest among the fragrant pine-needles, I found a tiny platform, where

the officer handed me his binoculars and pointed to a four-inch hole in the leafy screen. There right below us were two inconspicuous lines of trenches, zigzagging across a quiet field, bounded by leafless pollard willows. It was incredible to think that hundreds of men stood in those ditches, ever on the alert. At a first glance the countryside looked strangely peaceful and unhampered — farm-houses here and there, neatly hedged fields, and, farther back, a village with a white church. Look closer, though, and you see that the houses are mere shells, with crumbling walls and shattered windows; the fields are scarred and pitted with shell-holes, the village is ruined and lifeless, and the belfry of the church has collapsed. Above all, there is not an animal, not a sign of life in the fields or on the roads. Not a sound, except the distant hornet buzzing of an aeroplane.

On clear days there is a good deal of

aeroplane activity in our section, and one never tires of watching the planes. The German machines do not bomb us in this district, for some reason unknown to me, but they try to reconnoiter and observe for artillery fire. It is perfectly obvious, however, that the French have the mastery of the air, by virtue of their skillful and courageous pilots and superb fighting machines, and their superior skill in anti-aircraft fire. To watch a plane at an altitude of, say, nine thousand feet under shrapnel fire, one would think the pilot was playing with death; but in reality his occupation is not so tremendously risky.

Consider these factors: he is a mile and a half to two miles from the battery shooting at him, he presents a tiny mark, and his speed is from eighty to one hundred and twenty-five miles per hour. Above all, he can twist and turn or change his altitude at will. The gunner must

calculate his altitude and rate of speed, and after the lanyard is pulled, considerable time elapses before the shell reaches its mark. Meanwhile, the aviator has probably come down or risen or changed his course. It is like trying to shoot a twisting snipe with very slow-burning powder — the odds are all in favor of the snipe.

All the same, the spectacle never quite loses its thrill. High and remote against the sky you see the big reconnaissance machine going steadily on its way, its motor sending a faint drone to your ears. Keeping it company, darting around it like a pilot-fish around a shark, is the tiny, formidable appareil de chasse, a mere dot against the blue.

Crack! Whang! Boom! goes a battery near by, and three white puffs spring out suddenly around the distant machines, above, behind, below. Another battery speaks out, another and another, till the

sky is filled with downy balls of smoke. Suddenly the firing ceases, and the big German aero slants down swiftly toward its base. A sharper droning hits your ears. There, directly above us, a French fighting machine is rushing at two hundred kilometres an hour to give battle to the little Fokker. Close together, wheeling and looping the loop to the rattle of their mitrailleuses, they disappear into a cloud, and we can only guess the result.

One day later

I finished the paragraph above just as a wave of rifle and machine-gun fire rolled along the lines. Running out of the abri to see what the excitement was about, I saw two French aeros skimming low over the German trenches — where every one with any kind of a fire-arm was blazing away at them. Fortunately, neither one was hit, and after a couple of retaliatory belts, they rose and flew off to

the south. The Germans began to waste shrapnel on the air, and indiscreetly revealed the location of a battery, which the French promptly bombarded with heavy guns. Pretty soon all hands were at it — a two-hour Fourth of July.

I was on the road all day yesterday, afternoon and evening, getting back to the post at 10 P.M. One of the darkest nights I remember — absolutely impossible to move without an occasional clandestine flash of my torch. Far off to the right (twenty or thirty miles) a heavy bombardment was in progress, the guns making a steady rumble and mutter. I could see a continuous flicker on the horizon. The French batteries are so craftily hidden that I pass within a few yards of them without a suspicion. The other day I was rounding a familiar turn when suddenly, with a tremendous roar and concussion, a "380" went off close by. The little ambulance shied across the

road and I nearly fell off the seat. Talk about "death pops" — these big guns give forth a sound that must be heard to be appreciated.

Another break here, as since writing the above we have had a bit of excitement, in the shape of a raid, or coup de main. In sectors like ours, during the periods of tranquillity between more important attacks, an occasional coup de main is necessary in order to get a few prisoners for information about the enemy. We are warned beforehand to be ready for it, but do not know exactly when or where. I will tell you the story of the last one, as related by a slightly wounded but very happy poilu I brought in beside me.

"After coffee in the morning," he said, "our battalion commander called for one platoon of volunteers to make the attack — each volunteer to have eight

days' special leave afterwards. It was hard to choose, as every one wanted to go — for the 'permission,' and to have a little fun with the Boches. At noon we were ordered to the first line. Our rifles and equipment were left behind, each man carrying only a little food, a canteen of wine, a long knife, and a sack of grenades. Our orders were to advance the moment the bombardment ceased, take as many prisoners as possible, and return before the enemy had recovered from his surprise. At the point of attack the German trench is only twenty yards from ours — several nights before, they had rolled out a line of portable wire-entanglements. At 4.30 in the afternoon our 75's began to plough up the Boche trench and rip their wire to shreds. It was wonderful — along the line in front of us hundreds of our shells, bursting only twenty metres off, sent earth and wire and timbers high into the air — while not

one of us, watching so close by, was hurt.

"At 5.15 the guns ceased firing and the next instant we were over the parapet, armed with knives, grenades, and a few automatic pistols. After the racking noise of the bombardment, a strange quiet, a breathless tranquillity, seemed to oppress us as we ran through the torn wire and jumped into the smoking ruins of the enemy trench. In front of me there was no one, — only a couple of bodies, — but to the right and left I could hear grenades going, so it was evident that a few Germans had not retreated to the dugouts. Straight ahead I saw a boyau leading to their second lines, and as I ran into this with my squad, we came on a German at the turn. His hands were up and he was yelling, 'Kamerad, Kamerad!' as fast as he knew how. Next minute, down went his hand and he tossed a grenade into our midst. By luck it struck

mud, and the time-fuse gave us a moment's start. The corporal was killed and my pal, Frétard, who lies on the stretcher behind, got an éclat through the leg. We did not make a prisoner of the Boche.

"The abris of the second line were full of Germans, but all but one were barricaded. A few grenades persuaded the survivors to come out of this, with no fight left in them; but how to get into the others? In vain we invited them to come out for a little visit — till some one shouted, 'The stove-pipes!' Our barrage fire was now making such a fuss that the Boches farther back could not use their machine-guns, so we jumped on top of the dugouts and popped a half-dozen citrons into each chimney. That made them squeal, mon vieux — oh, là là! But it was time to go back — our sergeant was shouting to us; so, herding our prisoners ahead, we made a sprint back to our friends."

One of the prisoners was wounded, and he was hauled to the hospital by the chap with whom I share my quarters. I went to have a look at the German — always an object of curiosity out here. Had to shoulder my way through a crowd to get there. He lay on a stretcher, poor devil, hollow-eyed, thin, with a ragged beard — an object of pity, suffering and afraid for his life. His gray overcoat lay beside him and near it stood his clumsy hobnailed boots. German or no German, he was a human being in a bad situation — a peasant obviously, and deadly afraid.

Suddenly, a half-baked civilian — always the most belligerent class — reached up and plucked contemptuously at his leg, with an unpleasant epithet. Then a fine thing happened. A French soldier, lying near by on a stretcher, severely wounded, raised up his head and looked sternly at the crowd. "Enough," he said, "he is a Boche, I grant you; but first of

all remember that he is a soldier, wounded and in your power!"

We were at lunch yesterday when a friend rushed in to say that an aeroplane fight was starting, almost directly overhead. A big French reconnaissance plane was diving for safety, with a Fokker close behind and German shrapnel bursting all around, when a tiny French fighting machine appeared far above, plunging down like a falcon on its quarry. The Fokker turned too late: the Nieuport, rushing downward at one hundred and fifty miles an hour, looped the loop around the German. Two bursts of machine-gun fire came down faintly to our ears, and the next moment it was evident that the German was hit. Slowly at first, the Fokker began to fall — this way and that, like a leaf falling in still air, growing larger each moment before our eyes, until it disappeared behind a hill. High over the lines, scorning burst after burst

of German shrapnel, the tiny Nieuport sailed proudly back and forth, as if daring any Boche pilot to rise and try his luck. In the thrill of the superb spectacle, one forgot that the poor chap (a good sportsman, if he was a German!) had lost his life.

April, 1917

I have met some interesting types lately. One is Jean B——, a sergeant of infantry. Jean has been about the world a good bit, and when the war broke out was just finishing a contract in Spain. He promptly came to France and volunteered, and had only fifteen days of training before being sent to the front for a big attack. Knowing nothing of military matters and having distinguished himself in the first day's fighting, he was made a corporal at once; and next day, when the attack began again, he and his squad were the first to jump into a section

of German trench. There, abandoned in the hasty retreat, was a brand-new German machine-gun and forty sacks of ammunition. Jean is a canny boy, and before the officers had got to where he was, he had his men hide gun and cartridges in a clump of bushes.

The French made a gain of about two miles at this point, and owing to the nature of the ground, — artillery emplacements, and so forth, — the new lines were nearly a mile apart. Under these conditions, both sides were constantly making daylight patrols in the broken country between the trenches; and as Jean's captain was a good judge of men, he let him take his squad out daily, to do pretty much as he pleased. Pledging his men to absolute secrecy, Jean had them hide machine-gun and ammunition a little way in front of the new French lines, and then gave them a brief drill, in mounting and dismounting the gun, tripod, and so

forth. (He had worked in an ordnance factory, by the way.) Each man carried either a part of the gun or a few belts of cartridges.

One morning, just before dawn, they crawled up close to the Germans and hid themselves in a brushy watercourse — mitrailleuse set up and ready for action. Presently there were sounds of activity in front, and as day broke, they made out thirty or forty Germans, who, so far away and out of sight of the French, were out in the open, working on a new trench. Jean's men began to get excited and wanted action, but he calmed them, whispering to be patient. He himself is the most excitable man in the world — except in emergencies; a jovial type, with black hair and a pair of merry gray eyes set in a red, weather-beaten face.

Hour after hour they bided their time, until the Germans, only seventy-five yards away, assembled in a group for a

rest. Lying on his belly behind the gun, Jean sighted and pulled the lever, spraying lead into the unfortunate Boches until the last belt of two hundred cartridges had raced through. Then it was all hands dismount the gun and retreat at top speed. Sneaking "home" by devious ways, they smiled to see shells begin to smash into the position they had so lately left.

At supper that evening (the meal known universally as "la soupe"), the colonel came strolling down the trench with Jean's subaltern. The lieutenant nodded and pointed, then called Jean over.

"Ah," said the colonel, smiling, "so this is the type who was on patrol this morning — hum. I was in an advanced observation post on the hill above you and saw the whole affair with my glasses. And how many of those poor Germans did you kill?"

"I did not wait to count, my colonel."

"I will tell you, then; six escaped, out of thirty-eight — most remarkable rifle-fire I remember seeing. It sounded almost like a mitrailleuse at work. How many in your patrol? Five? Remarkable! Remarkable! Eh bien, good day, *sergeant.*"

"He was a type not too severe," remarked the ex-corporal, in telling the tale; "in short, un bon garçon."

This is the highest compliment a poilu can pay his officer; in fact, I once heard an ancient Territorial say it irreverently of Marshal Joffre, whom he had known in younger days, somewhere in the Orient.

Jean is at home in several languages, speaking perfectly French, German, Italian, and Spanish. I usually chat with him in the last, as in it I get the fine points of his narrative better than in French. His German was the means of getting him into an adventure such as very few men in the war have experienced. I can-

not, of course, vouch for the truth of what follows, but I have no reason to doubt his word, and know him to be capable of any foolhardy rashness. Such a thing would be impossible at the present time.

One dark night, shortly after midnight Jean — on a solitary patrol — was lying just outside the wire, about ten metres from the German trench, listening to locate the sentries. There was a faint starlight. Suddenly a whisper came from beyond the wire, a low voice speaking in broken French.

"Why do you lie so quiet, my friend? I saw you crawl up and have watched you ever since. I don't want to shoot you; I am a Bavarian."

"Good-evening, then," Jean whispered back in his perfect German.

"So," said the sentry, "you speak our language. Wait a moment, till I warn the rest of my squad, and I will show

you the way through the wire; there are no officers about at this hour."

Probably not one man in a thousand would have taken such a chance, but he did, and ten minutes later was standing in the trench in a German cloak and fatigue cap (in case of passing officers), chatting amiably with a much interested group of Bavarian soldiers. They gave him beer, showed him their dugouts, and arranged a whistle signal for future visits, before bidding him a regretful good-night. "We are Bavarians," they said; "we like and admire the French, and fight only because we must."

With characteristic good sense, Jean went at once to his captain the following morning and told him the whole story. The officer knew and trusted him and said without hesitation, "Go as often as you want, and keep your ears open."

So he made many a midnight crawl through the wires, after whistling the

soft signal. He carried with him each time a few litres of wine (a great luxury to the German soldiers), and in return they took him on long excursions through their trenches. Once he was in the German third line, more than a mile back. The sector was a very quiet one, though the trenches were close together, and one morning a crude arrow dropped into the French trench, bearing a note to Jean.

"Get into your dugouts at five this afternoon," it read; "there will be a bombardment, but no attack, we hope."

Another time, after a French bombardment, a similar note dropped in: "Don't send so many torpedoes — shells are all right, but your torpedoes have ruined some of our best sleeping-places. Remember we are not Prussians, but Bavarians."

Jean is just now back from a permission. He went away a reckless, jolly sort of an adventurer, and has come back sober,

serious, and tremendously in love. He told me a little about it, as we sat together in my dugout (I have a private one now, with a stove, a tiny window sticking up discreetly six inches above ground, and pictures on the walls), and the tale is so typical of war-time France that I can't resist telling it to you.

They had carried on quite a correspondence, as godmother and godson, before the longed-for permission came; and when A——, with her parents, of course, met him at the train, she seemed like an old friend. She is charming, as I know from her photograph, and sturdy brown Jean, togged out in his special permission uniform, with his neat shoes, bright leather puttees and belt, képi de fantaisie, and gold sergeant's wound- and service-stripes, looks every inch a soldier of France. At the end of the second day, he was walking with A—— and could contain himself no longer.

"Mademoiselle," he said, "I cannot, as a man of honor, stay here longer. I love you, — there, I have said it, — but I am penniless, and after the war shall have only what I can earn. Your father, on the other hand, is the most important merchant in this district — so you see it would (even if you were willing) be quite impossible for me to ask for your hand. I can never thank you enough for your kindness to a poor soldier; it has given me a glimpse of Paradise."

That evening, as he sat in his room, trying to make up an excuse to give the old people for leaving, the girl's mother came in, saying that she understood he was going, and was much hurt to think that her house had not pleased him. Then the old gentleman rushed in, radiant with smiling good humor.

"But hush, maman," he cried, "I know all. Also I know a man when I see one. You love our little A——, eh, ser-

geant? Well, what of it? And you are poor — well, what of that? When we old ones are gone, she will have everything — she is all we have, since Louis was killed at the Marne. You are a type that I love, my boy — out there at the front, helping to push the Boche out of France; do you suppose I would not rather have you for a son-in-law than some sacré espèce of a rich embusqué, riding by in his limousine?"

Rather superb, I think.

So, as an engaged man, he is making a poor attempt to be cautious. Also, he has a frightful case of cafard, that mysterious malady of the trenches, which is nothing but concentrated homesickness and longing for the sight of one's women folk, sweethearts, sisters, mothers. A couple of days ago, he came to me with a brilliant idea.

"See, Charlot," he said, "I have a scheme. You know Lieutenant P——, chief of the corps franc — tell him of me,

that I can speak German and can take prisoners, and tell him to ask my captain to detach me for the next coup de main."

To understand this, you must know that a coup de main is a raid, made after a brief artillery preparation, on the enemy trenches, not with the idea of gaining ground, but simply to get a few prisoners for information regarding regiments, and so forth. In the French army such raids are made by special selected companies of each regiment, who have no routine duty and get eight days' special leave after each raid that results in prisoners. These men are termed "corps franc." As you can see, Jean thought this a quick way to get back to his fiancée.

While we talked, by a freak of luck, who should knock at my door but Lieutenant P——, chief of our local corps franc, a very good friend and one I am proud to have. He is the perfect quintessence of a French subaltern, — twenty-

six years old, slight, wiry, and handsome; an Anglophile in everything relating to sport, as exquisite in dress and person as Beau Brummell, and as recklessly brave as Morgan's buccaneers. He has risen from the ranks, wears a gold bracelet, and has every decoration that a French soldier or officer can get, including the red ribbon. His Croix de Guerre has seven citations, and he has been five times wounded. He took to Jean at once, saying that he needed an interpreter for a raid which was coming in two or three days, and promised to see the captain about it at once.

"Better come with us," he said to me, whimsically. "I want to run down to Paris next week, and if the sergeant here and I don't get a prisoner or two, it will be because there are none left in the first line. Come on — you'll see some fun!"

"But," I said, "what is there in it for me? I'm ruined if I'm caught in any such

escapade, and in any case I get no permission."

"Oh, we'll fix that. Maybe you'd get a nice little wound like my last one; and if not, I'm an expert with grenades; I think I could toss one so you would just get an éclat or two in the legs — good for a week in Paris."

I thanked him without enthusiasm and declined.

The sequel to this came last night as I lay reading in my bunk. The evening had been absolutely quiet, not a rifle-shot along the trenches, until suddenly, about 10.30, the batteries set up their sullen thumping, mingled with the thud of exploding aerial torpedoes.

To my ears, concentrated artillery fire — not too far off — has a strangely mournful sound — heavy, dull, and fitful, like a dark thunderstorm in Dante's hell. The bombardment lasted exactly forty minutes, then absolute silence except for an

occasional pistol-shot (no one uses rifles in raids), and once more the sudden stammer of a mitrailleuse. As I lay there, safe in my warm bunk, I thought of gallant little P—— and jolly old lovelorn Jean, perhaps at that moment stealing through torn German wire with a brace of prisoners ahead of them, crouching low each time a star-shell sent up its warning trail of sparks, — or perhaps —

To-morrow, when I go back to the village for two days' rest, I shall look for them.

April 10, 1917

I am writing this in a new post of ours — a village several kilometres from the lines, where there are still civilians. As the hospital is very noisy at night, and one would have to sleep in a barrack, packed in among the wounded, I have arranged with a motherly old woman (patronne of the local café) to let me

have her spare room. I found an old cowbell and by an arrangement of strings and hooks have rigged it so that it can be rung at night from the street below. Talk about luxury! I have a real bed (about five feet long) with sheets, pillows, and a featherbed that reaches from feet to waist. When a night call comes, the bell tinkles, I leap out of bed, pull on breeches and coat and high felt "arctics," and in three minutes am off.

As there are no men about, I have been (in odd moments) splitting wood and moving the heavy beer and wine casks as required — work really far too heavy for women. The old lady, in return, often invites me in for a cup of steaming coffee with a dash of schnapps, and to-day she asked me to a family dinner — a superb civilian meal of ham and boiled potatoes and home-made choucroute. The latter must be tasted to be appreciated. She is quite bitter about a

branch of the Y.M.C.A. — called Foyer du Soldat — just opened here, which, with its free movies, papers, and so forth, has lured away much of her trade. "I pay a heavy license tax," she says, "and they pay nothing — nothing."

Useless to try to explain to the good old soul that the innocent must suffer in order that virtue shall triumph — or in other words, that the fantassin shall have amusement without beer. I comforted her with the regrettable truth that her boys will all be back when the novelty is worn off.

A great many of the men here are muleteers from the Spanish and Italian borders. Where the country is hilly and trails constitute the shortest route to the trenches, the French use a great many pack-mules to carry up provisions, ammunition, and supplies. A Western packer would be interested in their methods. Each mule has its master, who packs it,

washes it, feeds it, and on the march walks ahead, leading it by a rope. The pack-saddles and rigging are wonderful — they must be when one considers that the mules often carry three hundred pounds twenty miles a day, and sore backs are unknown.

A mule 's a mule, however, wherever you meet him — these are just the same "ornery" brutes we have at home. Their effect on the explosive southern French temperament is sometimes ludicrous. I stopped the other day to ask the way of a mule-skinner who was limping dejectedly ahead of his charge — the rest of the train was far ahead. After putting me on the road, he leaned wearily against a tree and explained that in all the world there was probably not another mule like his. It had kicked him yesterday, it had bitten him severely this morning, and just now, while he adjusted the pack, it had kicked him on the hip, so that in all

likelihood he would limp for life. While he talked, the mule sidled over, with drooping eyelids and sagging ears, and planted one foot firmly on the unfortunate Frenchman's toes. The whole thing seemed to have been done by accident — I could almost see the dotted line of innocence running from the mule's sleepy eye off into space. Without a word, the man set his shoulder against the mule, forced its weight off his foot, and tenderly inspected the injured part. Then, hands on hips, he regarded the mule with a long stare of dramatic contempt.

"Wouldst thou kill me, sacré espèce of a camel?" he said at last; "well, death would be better than this. Come, here I am!"

The day before yesterday, when I was out at one of our posts on the front, an Austrian 88 mm. shell fell in a crowd of mules and their drivers. Fortunately no one was hurt (by one of the freaks of

shells), but three mules were killed by the splinters. That night, with some misgivings, I tried a steak from the hindquarter of a five-year-old mule. *It was bully.* When you come to think of it, a mule is just as good food as a steer.

A week ago I was waiting at a front post for some wounded, when a mule train came by, packed with the huge winged aerial torpedoes so much in vogue just now. Each mule carried four of these truly formidable things. As the last mule passed, he slipped on the muddy slope, his feet flew out, and down he came with a whack, torpedoes and all. You ought to have seen us scatter, — officers, men, and mule-drivers, — like fragments of a bursting shell. As the mule showed signs of struggling, we had to rush back and gingerly remove the load before helping him up.

These torpedoes play a great part in war nowadays. They are cheap to man-

ufacture, carry an enormous bursting charge, and — shot out of small mortar-like guns, into which the steel or wooden "stem" of the torpedo is inserted — have a range of six or seven hundred yards. On days of attack you can see them, like huge black birds, soar slowly up from behind the trenches, hang poised for an instant, and dart down to make their formidable explosion, which sends clouds of débris, timber, and dirt, high into the air. Their fragments are very bad — long, thin, jagged things that come whizzing by and inflict terrible wounds. Many of them are equipped with "trailers," which outline their course in a shower of crimson sparks; and on nights of attack the sky is scored with their fiery trails.

A night attack is a wonderful thing to see: the steady solemn thunder of the guns, the sky glaring with star-shells and trails, the trenches flaming and roaring with bursting shell. It is like a vast natu-

ral phenomenon, — Krakatoa or Mont Pelée, — too vast and cataclysmic to be man's handiwork; and yet, into the maelstrom of spouting flames, hissing steel, shattering explosions, insignificant little creatures like you and me will presently run — offering, with sublime courage, their tender bodies to be burned and pierced and mangled. To me that is war's one redeeming feature — it brings out in men a courage that is of the spirit alone — above all earthly things.

April 23, 1917

I am sitting again in the little post I told you about in my last letter. The old lady is tidying up the café, the early morning sun is shining in gayly through the many-paned windows, and outside, along the picket-line, the mules are squealing and kicking while they have their morning bath. Pretty soon I shall go out foraging for a brace of eggs, and with

these, a piece of cheese, and some coffee shall make my déjeuner.

The local barrack is the only one I have found where one simply cannot eat, as the cook and his kitchen are unspeakable. Unless he has been caught out in a shower, he has certainly gone without a bath since the war started. After a glance at him and at his kitchen even the most callous poilu rebels.

We have now, attached to our section as mechanic, a French private who is rather an unusual type — a rich manufacturer in civil life, who, through some kink of character, has not risen in the army. He put in a year in the trenches and then, being middle-aged, was put behind the lines. He speaks English, is splendidly educated, and has traveled everywhere, but is too indifferent to public opinion ever to make an officer, or even a non-com. In his factory he had a packer, earning seven francs a

day, who was also mobilized, and who has now risen to the rank of lieutenant. Think of the gulf between a poilu and a French officer, with his authority, his galons and superb red-and-gold hat, and then consider that this lieutenant's idea of a permission is to go home, put on his oldest clothes, and spend the seven days working at his old job of packing and heading barrels. It takes France to produce this sort of thing.

The siege warfare to which, owing to strategic reasons, we are reduced in our part of the lines, with both sides playing the part of besieged and besiegers, gives rise to a curious unwritten understanding between ourselves and the enemy. Take the hospital corps, their first-aid posts and ambulances. The Germans must know perfectly well where the posts are, but they scarcely ever shell them — not from any humanitarian reason, but because if they did, the French would

promptly blow theirs to pieces. It is a curious sensation to live in such a place, with the knowledge that this is the only reason you enjoy your comparative safety. Likewise our ambulances. I often go over a road in perfectly plain view of the Boche, only a few hundred yards distant, and though shells and shrapnel often come my way, I am confident none of them are aimed at me. The proof of it is that no one has ever taken a pot-shot at me with rifle or machine-gun, either one of which would be a sure thing at the range. The other day an officer invited me down to see his newly completed observatory — a cunningly built, almost invisible stronghold on the crest of a hill, which commanded a superb view of the trenches and German territory behind them. It chanced to be an afternoon of unusual interest. The trenches, about eight hundred yards distant, were spread like a map beneath us, — a labyrinth of

zigzag ditches and boyaux, — all cunningly laid out on principles which I have been studying. With the powerful glasses lent me, I could make out the thickets of wire before the first lines. A heavy bombardment was in progress, and all along the lines, as far as the eye could see, clouds of smoke and earth were springing up and settling slowly down. Not a living being was in sight. Far off to the south, a flock of observation balloons floated motionless, high in air, like fat, hovering birds. Suddenly the man beside me, who had been staring through his glasses at a twenty-acre patch of woods a couple of miles away, gave an excited exclamation. "I have spotted it — the new battery of heavy guns that has been annoying us; they were too bold, for once."

Sure enough, I thought I made out a thin wisp of smoke trailing among the tree-tops at the south end of the wood.

The officer muttered a string of ca-

balistic instructions into his telephone receiver and motioned me to watch. A minute later, a battery of French heavy guns behind us began their deep, coughing thumps, sending enormous shells hurtling overhead with the pulsing rush of an express train, crescendo and diminuendo. The first shell fell short, showering the trees with earth and débris — the salvos that followed obscured the whole wood in clouds of smoke, broken branches, and dust. Twenty minutes of this before the battery went silent again. A final tremendous explosion, eclipsing all that had gone before, seemed to shake the trees to their roots.

"That will hold them for a while," said my friend exultantly, as he telephoned the news back to his battery; "we must have hit their magazine of propelling charges."

Next day I was sitting at lunch in our mess, distant about three hundred

yards from the observatory, when a series of heavy, racking explosions made the windows rattle. There is a distinct difference between the sound of a gun and that of a bursting shell. The first is a cracking *bang*, or *boum*, as the French say. The latter is a racking, dwelling roar — drawn out, if such a thing can be said of an explosion. Shells were bursting somewhere close to us — many of them. When I went outside I could hear, clear and waspish above the din, the *pinging* of splinters whizzing overhead, and the occasional crackle of a lopped-off branch. After half an hour of this, a man came panting up with the bad news that the new observatory was completely demolished. There you have the inner workings of siege-war; the Boches, with uncanny craft, knew of the observatory, let the French complete it, and might have let it alone, had it not been instrumental in destroying their battery. That led

them into their indiscreet action, for the French, in retaliation, promptly wiped off the map the most important German observatory — an elaborate affair whose exact location they had long known. This time the Boche did not dare retaliate. And so it goes.

There is a crack French gun-pointer near here who has brought down seven enemy planes in the past two months — a remarkable record in this quiet district. The last one fell close to one of our posts — its two passengers, German lieutenants, were dead, but scarcely marked by their drop into a snow-drift. One of them, a handsome young chap, with a little blond mustache, wore a gold bracelet, and in his pocket was a letter from his mother, accusing him of being an ungrateful son, who had only written twice in six months. Rather pathetic. There is a sort of chivalry in the air service which is a relief in the sordid

monotony of this war. A German plane was crippled a while ago, and had to volplane down smack into a parade-ground where a French regiment was at drill. The soldiers rushed out to make prisoners of the two German officers, who were not a hundred yards up; but the latter, with indomitable courage, loosed their Spandaus on the crowd, and were promptly riddled with bullets by the reluctant French. They received a funeral in accordance with their splendid death.

The code of the Prussian officer is never to surrender; but of course all cannot live up to this. In a recent raid, a sergeant I know made a prisoner of a German captain, who, as they walked to the rear, cursed his luck in fluent French, saying that he was caught unaware — that an officer never surrendered, but fought to the end.

"Stop here, my captain, and let us

consider this," said the sergeant seriously; "there are several articles of your equipment to which my fancy runs — that watch, for example, those leather puttees, and that fat purse I saw you change to your hip-pocket. Perhaps I can at once oblige you and gratify my whim. Suppose you were suddenly to run — a quick shot would save your honor, and me the trouble of escorting you back to the rear. And I am an excellent shot, je vous assure." But the German was not interested.

April 26, 1917

This afternoon the general of the division ordered us to present ourselves at headquarters at four o'clock. From lunch on there was a great shaving and haircutting, brushing and pressing of uniforms, and overhauling of shoes and puttees. Four o'clock found us lined up at the door of the wonderful old château, and next moment a superb officer, who

spoke English, — of the Oxford variety, — stepped out, introduced himself all around with charming courtesy, took our names, and ushered us in.

The general, a hawk-faced man of sixty, straight and slender as an arrow, with sparkling dark eyes, stood surrounded by his resplendent staff. As each name was announced, we walked forward to him, saluted and bowed, and shook hands. This over, we stepped back and mingled with the staff officers, who displayed a wonderful trick of making us feel at home in the first stiffness. Presently orderlies brought in champagne and glasses, and when every one had his glass in hand the buzz stopped while the general spoke.

"Your country, gentlemen," he said, "has done France the honor of setting aside this day for her. It is fitting that I should ask you here, in order to tell you how much we appreciate America's

friendship, which you and your comrades have been demonstrating by actions rather than words. I am an old man, but I tell you my heart beat like a boy's when the news came that the great Sister Republic — united of old by ideals of human liberty — had thrown in her lot with ours. I ask you to drink with me to the future of France and America — the sure future. You have seen France: our brave women, ready to make any sacrifices for the motherland; our little soldiers, invincible in their determination. Let us drink then to France, to America, and to the day of ultimate victory, which is coming as surely as the sun will rise tomorrow."

As he ceased, he stepped forward to touch glasses with each of us, — the invariable French custom, — and next moment a magnificent Chasseur band, outside on the terrace, crashed into the "Star-Spangled Banner." Quite thrilling,

I assure you. Later, we strolled through the fine old gardens. chatting with the officers while the band played. The general, while the most military man imaginable, has a very attractive brusque affability. We are a good-sized crowd as Americans run, and the French, who average shorter and stockier, never cease to wonder at our height. The old chap grabbed three or four of us by the shoulders and lined us up.

"Mais vous êtes des gaillards," he said, smiling; "see, I am five or six centimetres shorter than any of you. But wait, we have a giant or two."

With that he called over a grinning captain and pulled him back to back with our biggest man, whom he topped by a full inch.

"But, my general," laughed the officer, "it is not good to be so tall — too much of one sticks out of a trench."

The owner of the château — a stately

woman of fifty, proud of her name, her race, and her country, and an angel from heaven to the sick and poor for miles around — is an example of the kind of patriotism of which, I fear, we are in need. Her husband is dead; when the war broke out she had a daughter and two sons — gallant young officers whose brief lives had been a constant source of satisfaction and pride to their mother. The elder was killed at the Marne, and a while ago, the younger, her special pet, was killed here in an attack. A woman of her kind, to whom the continuance of an old name was almost a religion, could undergo no harder experience. At the grave-side she stood erect and dry-eyed, with a little proud smile on her lips, as her last boy was buried. "Why should I weep?" she asked some one who would have comforted her; "there is nothing finer my boys could have done if they had lived out their lives." Her heart must

be very nearly broken in two, but never a sign does she give; going about among her hospitals and peasant families as cheerful, interested, even gay, as if her only cares were for others. There is true courage for you!

To-day I went to a new post for some sick men, and who should be waiting for me but my friend Jean, of whom I wrote you before! His company has been transferred to this place. It was great to see his grinning face and to chatter Spanish with him. As the sick men had not finished lunch, Jean asked me to his mess, and we had a jolly meal with his pals. I have had to give up wine, as it seems to blacken our teeth horribly (all of us have noticed it, and we can trace it to no other source), and the Frenchmen can't get over the joke of seeing one drink water — extraordinary stuff to drink! All right to run under bridges or for washing purposes, but as a beverage — a quaint Amer-

ican conceit, handed down no doubt from the red aborigines — les peaux rouges indigènes — of our continent. Jean admitted that since December, 1914, he had not tasted water, and no one else could remember the last occasion when he had tried it.

As word had just come from the trenches that a wounded man was on the way in, I got my helmet and we strolled down the boyau to meet the stretcher-bearers. It was, to me, a new section of the front and very interesting. The country is broken and hilly, and the lines zigzag about from crest to valley in the most haphazard way, which really has been painfully worked out to prevent enfilading fire. There is scarcely any fighting here, as neither side has anything to gain by an advance, which would mean giving up their present artillery positions.

In one place the boyau ran down a

steep slope, badly exposed, and Jean said, "Follow me on the run!" We sprinted for twenty yards, and next moment, *tat-tat-tat-tat* came from the Boches, and little spurts of dust shot up behind us. They can never shoot quickly enough to hurt any one at this point, Jean said, but after all, "You can't blame a fellow for trying."

At the next turn we came on a train of the little grenade donkeys — so small that they make the tiniest Mexican burro seem a huge clumsy brute. They do not show above the shallowest trench, and each one carries two panniers full of grenades. These last are vicious little things of cast iron, checkered so as to burst into uniform square fragments, and about the size and shape of lemons. They make an astonishingly loud bang when they go off, and if close enough, as in a narrow trench, are pretty bad. At a little distance, of course, they are not very

dangerous. In the trench warfare — raids, infantry attacks, and so forth — they seem to have supplanted rifles, just as the knife has supplanted the bayonet.

May 11, 1917

Sunday, another lovely day. It is 7 A.M., and already the indefinable Sunday atmosphere has come over the camp. The shower-baths are open and strings of men are coming and going with towels on their arms. Under the trees little groups are shaving and cutting one another's hair, amid much practical joking and raillery.

One becomes very fond of the French soldier. Large floods of rhetoric have been poured out in describing him, and yet nearly every day one discovers in him new and interesting traits. Let me try to sketch for you a composite picture of the French infantryman — the fantassin who is winning the war for

France. On the whole, I do not see him as a boy, but as a sturdy middle-aged man — the father of a family. He is short and solidly built, with thick calves and heavy shoulders. His round head, on which the hair is short, crisp, and black, is surmounted by a battered blue helmet. He wears a long overcoat, looped up and buttoned at the sides, showing evidence, in several places, of home-made patching. It was once horizon blue, but has now faded to an ideally protective shade of blue-green-gray. About his middle is a worn cartridge-belt, and from either shoulder, their straps crossing on breast and back, hang his musettes — bags of brown canvas for carrying extra odds and ends, including everything from a bottle of wine to a dictionary. On his back is his square pack, an affair of formidable weight, to which he has lashed his rolled blanket in the form of a horseshoe, points down. Perched on top of this,

he carries his gamelle and quart — the saucepan and cup which serve for both cooking and eating; and beside them you perceive with astonishment that he has strapped a large German trench torpedo — a souvenir for the home folks. From his belt hangs the tin box, painted horizon-blue, which contains his gas-mask, and on the other side his long slender bayonet rattles against his thigh.

A large calloused hand, not too clean, holds his shouldered rifle at a most unmilitary angle. The gun has seen hard service, the wood is battered, and in places bright steel shows through the bluing; but look closely and you will see that it is carefully greased, and in the muzzle a little plug of cloth keeps out dust and moisture. In spite of a load which would make a burro groan, he walks sturdily, whistling a march between puffs of a cigarette. Glance at his face. The eyes are dark gray, deep-

set, and twinkling with good humor; they are the clear decisive eyes of a man who knows what he wants and has set about getting it. The nose is aquiline, the mouth strong and ironically humorous, the unshaven chin positive and shapely. It is the face of a breed that has been settling to type for many centuries, a race old in cultivation and philosophy.

What is he in civil life? That is hard to say. A lawyer, a farmer, a custom-house clerk, a cook — probably a cook; most of them seem to be cooks, and mighty good ones. Ours at the mess was assistant chef at the Savoy, in London, and when he has the material (for example a hind-quarter of mule, a few potatoes, some dandelions, a tin of lobster, and an egg) he can turn out a dinner hard to equal anywhere — delicious hors d'œuvres, superb soup, roast, sauté potatoes, salad, and so on.

The French soldier's one great joy and privilege is to grumble. Back in billets where he goes to rest, he spends the whole day at it — hour after hour, over a bock or a litre of wine, he complains of everything: the food, the uniforms, the trenches, the artillery, the war itself. To hear him, one would suppose that France was on the verge of ruin and disintegration. Let some unwise stranger make the slightest criticism of France, and watch the change. The poilu takes the floor with a bound. There is no country like France — no better citizens or braver soldiers than the French.

"Dis donc, mon vieux," he ends triumphantly, "where would Europe be now if it were not for us?"

To be a French general is a terrible responsibility. Their ears must burn continually, for every act is criticized, picked to pieces, and proved a fatal mistake,

daily, in a thousand roadside wine-shops. Some celebrity once remarked, that every French soldier was a potential general. He knew them; he was right. They are no carping destructive critics who tear things down but suggest no method of building up. On the contrary, any chance-met poilu will tell you exactly how any maneuver or bit of strategy should be carried out — from a trench-raid to an enveloping movement, which will — he is sure of it! — net fifty thousand prisoners. In last night's coup de main they caught only three Germans. "Do you know why, my friend? I will tell you. Our artillery cut the wires all right, and tapped on the front trench. Good. After that they raised their guns for the barrage, but pouf! the Boches had already run back to their dugouts in the second or third lines. Had the gunners made a barrage on the second line from the beginning, the Germans would have been

forced to remain in the first line, and instead of three, we would have bagged thirty. Oh, well, we get our extra leave anyhow, and you should have heard them squeal when we dropped grenades down their stove-pipes!"

The French infantryman would drive a foreign officer mad until he began to understand him and appreciate his splendid hidden qualities. The only thing he does without grumbling is fight; and, after all, when you come to think of it, that is a rather important part of a soldier's duty.

An officer wants a new boyau dug — you never *heard* such grumbling and groaning and kicking. Finally, a bit put out, he says, —

"All right, don't dig it, if you are all sick and tired, and think I make you work simply to keep you busy. It was only a whim of mine anyhow — the Boches put up a new machine-gun last

night, which enfilades the old boyau, and when day breaks and you go back to the third lines, they will doubtless put a dozen of us out of our misery."

As if by magic the new zigzag trench is dug, and the chances are that the officer finds a supply of extra-good firewood in his abri next day.

In an army like France's, one finds many odd birds among the simple soldiers. I was playing "shinny" (we introduced it and it has become very popular in our section) the other evening, and, when a soldier took off his coat, four thousand francs in bills dropped out of the breast pocket. Another evening, in a café, a roughly dressed soldier stood up to give us a bit of music — and for an hour the world seemed to stand still while one of the greatest violinists of France (two years at the front, twice wounded, Croix de Guerre, with several citations) made us forget that anything

existed except a flood of clear throbbing sound. It was a rough, drinking crowd — a moment before there had been a pandemonium of loud voices and clattering plates; but for an hour the listeners were still as death — not a whisper, not even a hand-clap of applause. It was, I think, the finest tribute I ever saw paid a musician. And so it goes: one never knows what variety of man is hidden beneath the uniform of faded horizon-blue.

June 17, 1917

At last I am free to sit down quietly for a letter to you. It has been a week of rather frenzied running about — passing examinations, and the like. I arrived here in the expectation of taking the first boat, crossing the continent, and seeing you.

A talk with some American officers changed the whole aspect of affairs and showed me that, if I was to be of any use,

my job was to remain here. At home, it seems, men are a drug on the market — the rub is to train them and fit them in. Here, on the other hand, they fairly welcome healthy young men — and will train us and put us where we will do the most good, with the least possible delay. Don't let yourself think that flying over here is unduly hazardous — a skillful pilot (as I hope to be) has as good a chance of living to a ripe old age as his comrades in the infantry. Numbers of them have been at it since 1914. The school where I hope to be is the finest in the world, and the machines are beyond praise.

Since writing the above, I have received my papers of acceptance in the Foreign Legion, conditional on passing the French physical tests. I have already passed the tests of the Franco-American Committee. Before cabling I took all the tests.

Later

I have passed the French examination and am to leave for the school in a day or two. I have been lucky!

It was interesting at the Paris recruiting office. I stood in line with dozens of other recruits for the Foreign Legion — all of us naked as so many fish, in the dirty corridor, waiting our turns. Each man had a number: mine was seven — lucky, I think! Finally the orderly shouted, "Numéro sept," and I separated myself from my jolly polyglot neighbors, marched to the door, did a demi-tour à gauche, and came to attention before a colonel, two captains, and a sergeant.

"Name, Nordhoff, Charles Bernard — born at London, 1887 — American citizen — unmarried — no children — desires to enlist in Foreign Legion for duration of war — to be detached to the navigating personnel of the Aviation," read the sergeant, monotonously. In two minutes

I had been weighed, measured, stethoscoped, ears and eyes tested, and passed.

The colonel looked at me coldly and turned to the captain.

"Not so bad, this one, hein? He has not the head of a beast."

I bowed with all the dignity a naked man can muster, and said respectfully, "Merci, mon colonel."

"Ah, you speak French," he rejoined with a smile; "good luck, then, my American."

II

THE FLEDGLING

HERE at Avord there are about seventy-five Americans of every imaginable sort — sailors, prize-fighters, men of the Foreign Legion, and a good scattering of University men. As good a fellow as any is H——, formerly a chauffeur in San Francisco. He is pleasant, jolly, and hard-working, with an absurdly amiable weakness for "crap-shooting," in which he indulges at all times, seconded by an American darky who is a pilot here — and a good one.

I can hear them as I write, snapping their fingers as the dice roll: "Come on 'leben — little seben, be good to me! Fifty days — little Phœbe — fever in the South! Read 'em and weep! Ten francs — let 'er ride. I'll fade you!" The crap-shooting circle is always either

stuffed with banknotes or reduced to a few sous — which latter predicament is a bit serious here, where we have to pay eight to ten francs a day to get sufficient nourishing food.

We sleep in barracks, about twenty to the room, on cots with straw mattresses. All days are pretty much alike. At 3 A.M. a funny little Annamite Chinaman, with betel-blackened teeth, comes softly in and shakes you by the shoulder in an absurdly deprecating way. You reach for your tin cup, and he pours out a quarter-litre of fearful but hot liquid, somewhat resembling coffee. Then a cigarette in bed, amid drowsy yawns and curses; a pulling on of breeches, golf-stockings, and leather coats; a picking up of helmets, and a sleepy march to the bureau, under the wind-gauges, barometers, and the great red balls that show the passing side (right or left) for the day.

"Rassemblement! Mettez-vous sur

quatre!" barks the adjutant, and off we go to the field. There till nine, or till the wind becomes too strong — each man taking his sortie of ten minutes as his name is called. Back about ten; then a lecture till eleven, a discussion after that, and the first meal of the day. Sleep afterwards till three or three-thirty; then a bath, a shave, brush teeth, and clean up in general. At five, assembly again, the same march, the same lessons till nine; then a meal, a smoke, and to bed at eleven.

It has been a bit strenuous this past month, getting accustomed to this life, which is easy, but absurdly irregular. Up at 3.30 A.M., and never to bed before 11 P.M. Meals snatched wherever and whenever possible. Some sleep by day is indispensable, but difficult in a barrack-room with twenty other men, not all of whom are sleepy. This, together with fleas and even more unwelcome little

nocturnal visitors, has made me rather irregular in my habits, but now I have got into a sort of régime — four and a half hours of sleep at night, some sleep every afternoon, and decent meals. Also I have discovered a sort of chrysanthemum powder, which, with one of the "anti" lotions, fairly ruins my small attackers. Baths, thank Heaven! I can get every day — with a sponge and soap. There is no real hardship about this life — it is simply a matter of readjusting one's self to new conditions and learning where and what to eat, how to sleep, how to get laundry done, and so forth.

This school is superb. I shall have the honor of being one of the last men in the world trained on the famous Blériot monoplane — obsolete as a military plane, but the best of all for training, because the most difficult. In spite of the fact that from the beginning to the end one is alone, it is said to be the safest of all training,

because you practically learn to fly in the "Penguins" before leaving the ground; and also because you can fall incredible distances without getting a bruise.

In practically all of the French planes the system of control is the same. You sit on cushions in a comfortable little chair — well strapped in, clothed in leathers and helmet. At your left hand are two little levers, one the mixture, the other the throttle. Your right controls the manche-à-balai, or cloche — a push forward causes the machine to point downward (pique) and a pull back makes it rise. Moving it sideways controls the ailerons, or warps the wings — if you tip left, you move the cloche right. Your feet rest on a pivoted bar which controls the rudder.

To rise, you head into the wind, open the throttle (steering with great care, as a little carelessness here may mean a

wrecked wing or a turn over), and press forward the cloche: you roll easily off; next moment, as the machine gathers speed, the tail rises, and you pull back the stick into the position of ligne de vol. Faster and faster you buzz along, — thirty, thirty-five, forty miles an hour, — until you have flying speed. Then a slight backward pull on the cloche, and you are in the air.

I made my first flight in a small two-place machine of the fighting type — a Nieuport. It is a new sensation, — one which only a handful of Americans have experienced, — to take the air at seventy-five or eighty miles an hour, in one of these little hornets. The handling of them is incredibly delicate, all the movements of the stick could be covered by a three-inch circle. A special training is required to pilot them, but once the knack is acquired they are superb, except for the necessity of landing at sixty or seventy

miles an hour. In the air you can do anything with them — they will come out of any known evolution or position.

Lately I have been making short low flights in a Blériot, and enjoying it keenly. All I know (a mere beginning) I have learned entirely alone, and the first time I left the ground, I left it alone. They simply put you in the successive types of machines, with a brief word of instruction, and tell you to fly — if you have n't the instinct, you are soon put out of the school. After your month of preparation in "Penguins" and "grass-cutters," the first short flight is a great experience.

My name was at the end of the list, so for two hours of increasing tension I watched my mates make their débuts. We were about a dozen, and there were some bad "crashes" before my turn came. At last the monitor called me and I was strapped in behind the whirling stick. The monitor waved his arm,

the men holding the tail jumped away, and I opened the throttle wide, with the manche-à-balai pushed all the way forward. Up came the tail; I eased back the control bit by bit, until I had her in ligne de vol, tearing down the field at top speed. Now came the big moment, mentally rehearsed a hundred times. With a final gulp I gingerly pulled back the control, half an inch, an inch, an inch and a half. From a buoyant bounding rush the machine seemed to steady to a glide, swaying ever so little from side to side. A second later, the rushing green of grass seemed to cease, and I was horrified to find myself looking down at the landscape from a vast height whence one could see distant fields and hangars as if on a map. A gentle push forward on the manche brought her to ligne de vol again; a little forward, a reduction of gas, a pull back at the last moment, and I had made my first landing — a beauty,

without a bounce. To-night I may crash, but I have always the memory of my beginner's luck — landing faultlessly from fully twelve feet!

Lack of sleep is our main foe — a hard one to combat, as all sorts of other things develop as its followers; one has simply to learn to sleep in any odd moments of the day or night.

I may still "fall down" and be "radiated" to an observation or bombing plane (which is of course no disgrace); but on the whole I have good hopes of making a fighting pilot. Flying (on a Blériot monoplane) is by no means as easy as I had supposed. It took us four weeks to learn to run one at full speed, *in a straight line*, on the ground. The steering and handling of the elevators (which regulate height of tail) are extremely tricky, and many men are thrown out or sent to other schools (Caudron, Farman, or Voisin) for inaptitude or "crashes" at this stage.

Then comes the stage of low straight-away flights, when you leave the ground fast and in correct line of flight, and have to land smoothly. Make no mistake — landing any kind of an aeroplane is hard, and to land the fast fighting machines is a very great art, which forty per cent of picked young men never acquire. They are so heavy for their supporting area, that the moment they slow down to less than seventy-five or eighty miles an hour they simply fall off on a wing (or "pancake"). Even a Blériot requires a good eye and a steady delicate touch and judgment to land in decent style. You are flying, say, three hundred feet up, and wish to land. Forward goes your stick, the machine noses down as you cut the motor. The ground comes rushing up at you until the moment comes when you think you should "redress" — precisely as a plunging duck levels before settling among the decoys.

If you have gauged it to a nicety, you skim over the ground a few yards up, gradually losing speed, and settling at last without a jar or break in the forward motion. If you redress too late, you turn over (capoter), or else bounce and fall off on a wing. (I have seen men bounce fifty feet!) If you redress too high, you lose speed too far above the ground, and either pique into the ground and turn over, fall flat, or crash on one wing.

The secret of the whole game of learning to fly is, I believe, never to get excited. I have seen beginner after beginner smash when he was first sent up to fly. They run along the ground, pull back the stick, as told, and a moment later are so astounded to find themselves twenty or thirty feet off the ground that they can think of nothing but shutting off the throttle. Many crash down tail first, with controls in climbing position to the last. If they would simply think, —

"Ha, old boy, you're in the air at last — some thrill, but the main thing now is to stay here a bit and then ease down without a crash. Ease the stick forward — now we have stopped climbing. Feel that puff — she's tipping, but a little stick or rudder will stop that. Now pique her down, and reduce the gas a notch or two. Here comes the ground — straighten her out; too much, she's climbing again; there, cut the gas — a little more — there — not a bad landing for the first try."

Really there is no system in the world like learning alone, but it costs the Government, I am told, from $30,000 to $40,000 to turn out a fighting pilot. Three, six, ten machines — costly, delicate things — are smashed daily in the school. Never a word is said, until a man smashes one too many, when he is quietly sent to the easier double-command school of bombardment or observation flying.

Some of the fellows are in bad shape nervously. Any night in our barracks you can see a man, sound asleep, sitting up in bed with hands on a set of imaginary controls, warding off puffs, doing spirals, landings, and the like. It is odd that it should take such a hold on their mental lives.

I enjoy hugely flying the old monoplane, especially when I fly home and nose her down almost straight for a gorgeous rush at the ground. As you straighten out, a few yards up, lightly as a seagull, and settle on the grass, it is a real thrill.

I have purchased, for twenty-five francs, a beautiful soft Russia-leather head-and-shoulder gear, lined with splendid silky fur. It covers everything but one's eyes, — leaving a crack to breathe through, — and is wonderfully warm and comfortable.

I have finally finished the Monoplane

School, which is the end of preliminary training. There remain spirals, etc., an altitude, and a few hundred miles of cross-country flying, before I can obtain my brevet militaire and have the glory of a pair of small gold wings, one on each side of my collar. After that I shall have seven days' leave (if I am lucky), followed by two or three weeks perfectionnement on the type of machine I shall fly at the front. If I smash nothing from now on, I shall have practically my choice of "zincs" — a monoplace de chasse, or anything in the bombing or observation lines. If I break once, I lose my chasse machine, and so on, down to the most prosaic type of heavy bomber. Only one compensation in this very wise but severe system — the worse the pilot, the safer the machine he finally flies.

In spite of all my hopes, I had the inevitable crash — and in the very last class of the school. Landing our Blériots

is a rather delicate matter (especially to a beginner), and last week I had the relapse in landings which so few beginners escape, with the result that I crashed on my last flight of the morning. I felt pretty low about it, of course, but on the whole I was not sorry for the experience, which blew up a lot of false confidence and substituted therefor a new respect for my job and a renewed keenness to succeed. After that I did better than ever before, and made a more consistent type of landing.

Guynemer, the great French "Ace," has disappeared, and from accounts of the fight one fears that he is dead. What a loss to France and to the Allies! the end of a career of unparalleled romantic brilliancy. I shall never forget one evening in Paris last spring. I was sitting in the Café de la Paix, under the long awning that fronts the Boulevard des Capucines.

All Paris was buzzing with Guynemer's mighty exploit of the day before — four German planes in one fight, two of them sent hurtling down in flames within sixty seconds. It took one back to the old days, and one foresaw that Guynemer would take his place with the legendary heroes of France, with Roland and Oliver, Archbishop Turpin, Saint Louis, and Charles Martel.

Presently I looked up. A man was standing in the aisle before me — a slender youth, rather, dressed in the black and silver uniform of a captain in the French Aviation. Delicately built, of middle height, with dark tired eyes set in a pale face, he had the look of a haggard boy who had crowded the experience of a lifetime into a score of years. The mouth was remarkable in so young a man — mobile and thin-lipped, expressing dauntless resolution. On his breast the particolored ribbons

of his decorations formed three lines: Croix de Guerre, Médaille Militaire, Officer of the Legion of Honor, Cross of St. George, English Military Cross, and others too rare for recognition.

All about me there arose a murmur of excited interest; chairs were pushed back and tables moved as the crowd rose to its feet. Cynical Swiss waiters, with armloads of pink and green drinks, halted agape. A whisper, collective and distinct, passed along the terrace: "It is Guynemer!"

The day before, over the fiery lines, he had done battle for his life; and this evening, in the gay security of Paris, he received the homage of the people who adored him.

He had been looking for a table, but when it became no longer possible to ignore the stir, he raised his right hand in embarrassed salute and walked quickly into the café.

I spent my ten days' leave in a trip to Nice, and used up about half of it in getting there.

The trip south was a martyrdom — a long stifling ride to Paris, three days' wait there for a reserved place to Marseilles, a day and a night standing up in a corridor from Paris to Marseilles (had to give up my seat to an unfortunate woman with two youngsters), and twenty-three hours more in a corridor to get to Cannes. On the whole, the worst journey I recollect. No stops for meals, so we all nearly starved, till I finally obtained an armful of bottled beer and some sandwiches.

I sat down on a trunk in the corridor and nodded off to sleep, only to be awakened half an hour later by H—— F—— (S——'s cousin), who stole up with a gesture for silence, and pointed at me with a shake of his head and a broad grin. It must have been rather a rakish tab-

leau. On the floor to my left were half a dozen empty bottles; on one end of the trunk I sat, heavy-eyed and half awake, and beside me, sound asleep, with her head on my shoulder, was a respectable, very attractive, and utterly unknown young woman! C'est la guerre! I motioned H—— away and promptly went to sleep again.

In Marseilles I had time for the Corniche, to see Monte Cristo's castle, and eat a bouillabaisse, which I cannot recommend without reserve. With an enormous floating population of sailors, shipping booming, and streets ablaze at night, Marseilles seems far away from the war, after the hushed gloom of nocturnal Paris.

The trials for my military brevet were by far the most interesting thing I have done in aviation. On finishing the sixty horse-power Blériot class, I was told that I would have to do my brevet work on a small Caudron biplane, as there were

no Blériots available. A few short flights in the Caudron gave me confidence that I could handle it; so one rather cloudy morning the officer told me to make my official altitude — which is merely one hour's stay at heights of over seven thousand feet. I pulled on my great fur combination and fur-lined boots, adjusted mittens, helmet, and goggles, and stepped into my machine, number 2887, which the mechanic had been tuning up. "Coupe, plein gaz," he shouted, above the roar of a score of motors, and gave the stick half a dozen turns. Then, "Contact reduit"; and as I yelled back, "Contact reduit," after the old starting formula, he gave a quick half turn to the blades. Off she went with a roar, all ten cylinders hitting perfectly, so I motioned him to pull out the blocks from before the wheels. A quick rush and a turn headed me into the wind, and the next moment the starter's arm shot forward.

Old 2887 is a bully 'bus. I was off the ground and heading up in forty yards. It was rather an occasion for a beginner who had never before flown over twenty-five hundred feet. The little Caudrons, of course, are not high-powered, but she climbed splendidly. In ten minutes I was circling over the camp at thirty-eight hundred feet, and in twenty, I had reached six thousand, just under the roof of the clouds. There was only one blue hole through, so up this funnel I climbed in decreasing circles, till I finally burst out into the gorgeous upper sunlight. At eight thousand feet I began to float about in a world of utter celestial loneliness — dazzlingly pure sun, air like the water of a coral atoll, and beneath me a billowy sea of clouds, stretching away to infinity. Here and there, from the cloudy prairies, great fantastic mountain ranges reared themselves; foothills and long divides, vast snowy peaks, impalpable sisters of

Orizaba or Chimborazo, and deep gorges, ever narrowing, widening, or deepening, across whose shadowy depths drove ribbons of thin gray mist.

Once, as I was sailing over a broad cañon, I saw, far off in the south, a dark moving dot, and knew with a sudden thrill that another man like myself, astride his gaunt buzzing bird, was exploring and marveling at this upper dream-world.

At last the hour was up. I shut off the motor and drove downward in a series of long easy glides. Going through the clouds, one loses all sense of balance and direction. It is bizarre and sometimes dangerous. You plunge out into the old gray world beneath, to find yourself in a nose-dive, or off on a wing, or upside down — it is all the same in a cloud.

The balance of the military trials consists in spirals, and so forth, and a lot of cross-country flying by map and

compass. First you make two round trips to a place fifty miles away, and then two triangular trips of about one hundred and fifty miles each. It is very easy, if you keep your wits about you and have no hard luck. Roads, railroads, rivers, woods, and canals are the principal guides to follow; towns and cities you can only recognize by having counted their predecessors, unless there is some very prominent building, cathedral or factory. A road, from three thousand feet, shows as a very straight white line, occasionally making angular turns. A railroad is a dark gray line, always curving gently when it turns. Canals are ribbons of water, very straight, between twin lines of trees. And so on. You watch your compass, to check up the tend of roads and railroads, watch your altimeter and tachometer (which tells the speed of your engine), and above all watch always ahead for suitable landing fields, in case

of motor trouble. The wind also must be borne in mind; its direction can be told from smoke. I was lucky and had no trouble at all.

At Nice I ran into many Americans, and there were a good many Britishers about, recovering from the recent severe fighting around Passchendaele. They are a quiet and agreeable lot — very interesting when they talk about their work, which is seldom.

One captain had strolled into some heavy fighting with no weapon but a heavy cane, and with this, walking astride of a deep narrow enemy trench, he had killed eight Germans! An Australian captain, with the rare ribbon of the V.C. on his breast, had gone into a crowded German dugout with one companion, who was wounded at the first exchange of bombs. Single-handed, he had bombed out the Boches, taken forty prisoners back single-handed, and returned to bring out his wounded brother officer. An epic feat!

III

FULL-FLEDGED

Soon after my stay at Nice I went for a month to the Combat and Acrobatic School of Pau, which completes the most dangerous of all the flying training. A wonderful experience — somersaults, barrel-turns, corkscrew dives, every conceivable aerial caper, and long flights daily: skimming the highest peaks of the Pyrenees at three hundred feet above the snow — trips to Biarritz and along the coast, flying ten feet above the waves, etc.

It is hard to say enough in praise of the school at Pau — the hundreds of splendid machines, the perfect discipline and efficiency, the food, the barracks, the courteous treatment of pilots by officers and instructors. We were twenty

Americans, in a clean airy barrack, with an Annamite to make the beds and sweep up. The school covers an enormous area in the valley of the Gave, just under the Pyrenees, and is ideal for an aviation center so far as weather conditions go, its one drawback being that motor-trouble, out of range of the aerodromes, means almost inevitably a smash. All along the Gave they have the smallest fields and the highest hedges I ever saw. The climate is superb — like the foothill climate of California: cool nights, delicious days, wonderful dawns and sunsets.

They started us on the eighteen-metre machine, doing vertical spirals, which are quite a thrill at first. You go to a height of about three thousand feet, shut off the motor, tilt the machine till the wings are absolutely vertical, and pull the stick all the way back. When an aeroplane inclines laterally to over forty-five degrees, the controls become reversed—the rudder

is then the elevator, and the elevator the rudder, so that, in a vertical spiral, the farther back you pull the stick, the tighter the spiral becomes. You are at the same time dropping and whirling in short circles. I once did five turns in losing a thousand feet of altitude — an unusual number, the monitor told me with satisfaction. Usually, one loses about three hundred feet to each turn, but on my first attempt, I lost twenty-one hundred feet in three fourths of a turn, because I did not pull back enough on the stick.

After the eighteen-metre spirals we were given a few rides on the fifteen-metre machine — very small, fast and powerful, but a delicious thing to handle in the air; and after left and right vertical spirals on this type, we went to the class of formation-flying, where one is supposed to learn flying in squadron formation, like wild geese. This is extremely valuable, but most men take

this chance for joy-riding, as they have petrol for three hours, and are responsible to no one.

On my first day in this class I found no one at the rendezvous, so I rose to about four thousand feet, and headed at a hundred miles an hour for the coast. In thirty-five minutes I was over Biarritz, where my eyes fairly feasted on the salt water, sparkling blue, and foam-crested. I do not see how men can live long away from the sea and the mountains. My motor was running like a clock and as I was beginning to have perfect confidence in its performance, I came down in a long coast to the ground, and went rushing across country toward the mountains, skimming a yard up, across pastures, leaping vertically over high hedges of poplar trees, booming down the main streets of villages, and behaving like an idiot generally, from sheer intoxication of limitless speed and power.

In a few moments I was at the entrance of one of the huge gorges that pierce the Pyrenees — the sort of place up which the hosts of Charlemagne were guided by the White Stag: deep and black and winding, with an icy stream rushing down its depths. Why not? I gave her full gas and whizzed up between black walls of rock that magnified enormously the motor's snarl, up and up until there was snow beneath me and ahead I could see the sun gleaming on the gorgeous ragged peaks. Up and up, nine, ten, eleven thousand feet, and I was skimming the highest ridges that separate France and Spain. Imagine rising from a field in Los Angeles, and twenty-five minutes later flying over the two-mile-high ridges of Baldy and Sheep Mountain, swooping down to graze the snow, or bounding into the air with more speed and ease than any bird.

At last, as my time was nearly up, I

headed back for Pau. A few minutes later, just as I sighted the pygmy groups of hangars, my motor gave forth a loud bang and a sheet of flame, and several chunks of metal tore whizzing through the aluminum hood. Automatically, I pulled at the lever which closes the gasoline flow and tilted the machine forward to keep my speed. Another bang, accompanied by black smoke. "Holy mackerel!" I thought; "this is the end of me! Let's see — in case of fire, shut off petrol, open throttle, and leave the spark on. Then go into a nose-dive."

Somehow you can't seem to get very excited at such moments, — everything seems inevitable, — good or bad luck. I nose-dived, came out at five thousand feet, killed my propeller, and was gratified to see, on looking behind, that there was no more smoke. Starting the motor was of course out of the question, as it would have promptly taken fire; so I shut

off throttle and spark, struck an easy glide, and began an anxious search for a field. Most of them were no larger than postage-stamps, and I knew they were hedged by the beastly poplars, but at last I spotted a long one, in the direction of the wind, though not long enough to afford more than a bare chance of avoiding a crash. It was the only hope, at any rate; so down I coasted in glides and serpentines, jockeying to lose height just over the trees. As luck would have it, I was a few feet low and had to chance jumping the trees with none too much speed. The splendid stability of the Nieuport saved me from a wing-slip, and a moment later I landed with a bang in a ditch, breaking one wheel and stopping within ten yards of a formidable line of willows.

I crawled out of my seat and lay down in the long grass to rest, as my head ached villainously from the too rapid descent. Somehow I dozed off and was

awakened by the friendly tongue of a huge Basque shepherd dog. His mistress, a pretty Spanish-speaking peasant girl, appeared a minute later, and her family were very decent to me. After some hot coffee with brandy, and a piece of goat cheese, I attended to the formalities and went back to camp.

After formation-flying we went to the acrobatic class or "Haute École du Ciel," where you are taught to put a machine through the wildest kinds of maneuvers. This is the most dangerous class in any aviation training in France — many excellent pilots, whose nerves or stomachs would not stand the acrobatics, rest in the little cemetery at Pau. Wonderful sport, though, if nature intended one for that sort of thing! The most dreaded thing one does is the spinning nose-dive, or vrille (gimlet), which formerly was thought invariably fatal. They have now

discovered that the small, very strong machines will come out of it safely, if the rudder is put exactly in the middle and the stick pushed forward.

The instructor in this class was a very dandified lieutenant, in a Bond Street uniform, and wearing a monocle, who lay in a steamer-chair all day, gazing up into the sky at the antics of his pupils. Around him stood assistants with field-glasses, who watched the heavens anxiously, and would suddenly bark out, "Regardez, mon lieutenant — l'Américain Thompson en vrille." The lieutenant would then languidly look up at the machine pointed out (they are distinguished by broad stripes, or checkerboards, or colors), and, if the "type" up above had done well, would remark, "Pas mal, celui-là." If some unfortunate plunged into the ground and killed himself, the officer would rise gracefully from his chair, flick the dust from his sleeve,

and call for the "Black Cat," his special "taxi." Jumping in with remarkable speed, he rose in a series of the most breakneck evolutions, and flew to the scene of the accident. In reality, his pose is the best in the world, as it keeps the pilots gonflés, that is, courageous and confident, as opposed to dégonflés, or scared and nervous.

I was watching all this from the ground, when a monitor unexpectedly called out, "Nordhoff, Nordhoff!"

"Present!" I yelled, as I ran toward him.

"You will take the checker-board," he ordered, "rise to twelve hundred metres, and do one vrille and two upside-down turns."

I admit that I had a slight sinking spell as I walked to the machine, a little thirteen-metre beauty. (Think of it, only thirteen square yards of supporting surface!) It was all right as soon as I was

strapped in and had the motor going. Up we went, the "Bébé" climbing like a cat, at incredible speed, while I anxiously repeated, again and again, the instructions. Two turns of the field gave me my thirty-six hundred feet. This was no time to hesitate, so, as I reached the required spot, away from the sun, I shut off the motor, took a long breath, and pulled back a bit on the stick. Slower and slower she went, until I felt the rather sickening swaying that comes with a dangerous loss of speed. The moment had come. Gritting my teeth, I gave her all the left rudder and left stick, at the same moment pulling the stick all the way back. For an instant she seemed to hang motionless — then with unbelievable swiftness plunged whirling downwards. "Remember, keep your eyes inside — don't look out, whatever happens," I thought, while a great wind tore at my clothing and whistled through the wires. In a wink of time I

had dropped six hundred feet: so I carefully put the rudder in the exact center, centered the stick, and pushed it gently forward. At once the motion grew steadier, the wind seemed to abate, and the next moment I dared to look out. It was over — I was in a steep glide, right side up, safe and sound. I had done a vrille and come out of it! A gorgeous sensation! I loved it, and queerly enough my first bewildered thought was, "M—— would adore that!"

Just to show the lieutenant that I was having a good time, I buzzed up again and did two more vrilles, looking out the whole time at the panorama of Pyrenees, villages, and river, whirling around with the most amazing rapidity. Not a thing for bilious or easily dizzy people though, as it means horses at the walk if you fail to do the right thing at exactly the right moment.

After the acrobatics, we went to classes

in machine-gun shooting and combat-flying — very interesting and practical, but not to be talked about.

After Pau, I had forty-eight hours' leave in Paris, bought a few things I needed for the front, and was then sent to a place it is forbidden to mention, expecting soon to get to flying over the lines.

On New Year's morning, as it was snowing hard and there was no flying, I sat by a cozy fire, in the house of some English people. Curious thing, running into them here. They are of the tribe of English who wander over the face of the earth, and make England what she is. The man of the house is an expert on ——, and has pursued his unusual vocation in Cuba, Jamaica, Honduras, Guiana, "Portuguese East" and other parts of Africa, as well as in Ceylon and a few other places I forget. Here he is now, as ex-

pert for the French. His wife and seven children, who speak French, Portuguese, Spanish, and Zulu, I think, follow him everywhere, and are everywhere equally at home. I have tea with them after work, and, needless to say, they are a Godsend in this desolate place. Let us all pray that next New Year's day we shall be thanking God for a victorious peace and returning to civilian life, never to put on uniforms again. The finest uniform of all is the old civilian suit — brass buttons and gold braid to the contrary.

For this winter air-work, which is the coldest known occupation, I think, this is the way we dress. First, heavy flannels and woolen socks. Over that, a flannel shirt with sleeveless sweater on top, and uniform breeches and tunic. Boots and spiral puttees (very warm things, if not put on too tightly) go on next, and over all we pull on a great combination, or fur-lined "teddy-bear" suit—waterproof

canvas outside. Over our boots we pull fur-lined leather flying boots, reaching half-way up to our knees. For head-gear, a fur-lined leather cap, and around the neck, several turns of gray muffler. A variety of mask and a pair of "triplex" goggles to protect one's face from the icy breeze. With all this, and heavy fur gloves, one can keep reasonably warm.

As the 16th of January was the first good flying day for some time, there was much activity. After lunch I went to the aerodrome just in time to see the combat patrol come swooping down. An excited crowd was gathered about the first machine in, and I learned that one of our best pilots had just been brought down by a German two-seater, and that H——, a nineteen-year-old American in our sister escadrille here, had promptly brought the Hun down. I was proud to think that an American had revenged our comrade. This makes H——'s second German

within a week — a phenomenal record for a beginner. He is an unusual youngster, and handles a machine beautifully. He seems to have the mixture of dash, cold nerve, and caution which makes an "ace."

The German fell ten thousand feet directly over the trenches, but at the last moment managed to straighten out a bit and crashed two hundred yards inside his lines. H—— followed him down, and gliding over the trenches at one hundred feet, saw one German limp out of the wreck and wave a hand up at the victor.

Another American boy had quite an exciting time lately when his motor went dead far inside the enemy lines. Luckily he was high at the time; so he flattened his glide to the danger-point, praying to be able to cross into friendly country. Down he came, his "stick" dead, the wind whistling through the cables, until close ahead he saw a broad

belt of shell-marked desolation, criss-crossed by a maze of meaningless trenches. The ground was close; automatically he straightened out, avoiding a pair of huge craters, touched, bumped, crashed into a thicket of wire, and turned over. A jab at the catch of his belt set him free; but the really important thing was whether or not he had succeeded in crossing the German lines. Wisely enough, he crawled to a shell-hole, and from its shelter began to reconnoiter warily. Muddy figures began to appear from various holes and ditches, and at length a soldier who, so far as appearances went, might have belonged to any army, leaned over the edge of the hole and said something in *French.* Young S—— at that began to breathe for the first time in at least a quarter of an hour. His discoverer led him to a spacious dugout where two generals were at lunch — a wonderful lunch, washed down with beverages for-

bidden to any but generals. The great ones made the corporal welcome, laughed themselves ill over his voluble but wonderful French, plied him with food and good Scotch whiskey, and sent him home in one of their superb closed cars.

Now that so many young Americans are beginning to fly in France, I fancy that the people at home must wonder what sort of a time their sons or brothers are having — how they live, what their work is, and their play. Most people who have an immediate interest in the war must by now possess a very fair idea of the military aviation training; but of the pilot's life at the front I have seen little in print.

I can speak, of course, only of conditions in the French aviation service; but when our American squadrons take their places at the front, the life is bound to be very similar, because experience

has taught all the armies that, to get the best results, pilots should be given a maximum of liberty and a minimum of routine, outside of their duty, which consists in but one thing — flying.

Let us suppose, for example, that an American boy — we will call him Wilkins, because I never heard of a man named Wilkins flying — has passed through the schools, done his acrobatics and combat-work, and is waiting at the great dépôt near Paris for his call to the front. Every day he scans the list as it is posted, and at last, hurrah! his name is there, followed by mysterious letters and numbers — G.C. 17, or S.P.A. 501, or N. 358. He knows, of course, that he will have a single-seater scout, but the symbols above tell him whether it will be a Spad or a Nieuport and whether he is to be in a groupe de combat ("traveling circus," the British call them) or in a permanent fighting unit.

Wilkins is overjoyed to find he has been given a Spad, and hastens to pack up, in readiness for his train, which leaves at 6 P.M. When his order of transport is given him, he finds that his escadrille is stationed at Robinet d'Essence, in a fairly quiet, though imaginary, sector. Before leaving the dépôt he has issued to him a fur-lined teddy-bear suit, fur boots, sweater, fur gloves, and a huge cork safety helmet, which Wisdom tells him to wear and Common Sense pronounces impossible. Common Sense wins; so Wilkins gives the thing to the keeper of the "effets chauds pour pilotes," and retires.

His flying things stuffed into a duffle-bag, which he has checked directly through to far-off Robinet, our hero boards the train with nothing but a light suitcase. He is delirious with joy, for it is long since he has been to Paris, and at the dépôt discipline has been severe and

luxury scant. Every journey to the front is via Paris, and the authorities wink a wise and kindly eye at a few hours' stop-over. Outside the station, an hour later, Wilkins is conscious of a sudden odd feeling of calm, almost of content, which puzzles him until he thinks a bit. Finally he has it — *this* is what he is going to fight for, what all the Allies are fighting for: this pleasant, crowded civilian life; the dainty Frenchwomen going by on the arms of their permissionnaires, the fine old buildings, the hum of peaceful pursuits. In the schools and at the waiting dépôt he had nearly lost sight of real issues; but now it all comes back.

At his hotel he calls up Captain X—— of the American Aviation, — an old friend, who is in Paris on duty, — and is lucky enough to catch him at his apartment. They dine at the Cercle des Alliés — the old Rothschild palace, now made into a great military club,

where one can see many interesting men of all the Allied armies lunching and dining together. Dinner over, they drop in at the Olympia, watch the show a bit, and greet a multitude of friends who stroll about among the tables. A great deal of air-gossip goes on: A—— has just bagged another Boche; B——, poor chap, was shot down two days ago; C—— is a prisoner, badly wounded. At a table near by, Wilkins, for the first time, sets eyes on Lufbery, the famous American "ace," his breast a mass of ribbons, his rather worn face lit up by a pleasant smile as he talks to a French officer beside him.

At eleven our young pilot says good-bye to his friend and walks through the darkened streets to his hotel. What a joy, to sleep in a real bed again! The train leaves at noon, which will give him time for a late breakfast and a little shopping in the morning. After the first

real night's sleep in a month, and a light war-time breakfast of omelet, bacon, broiled kidneys, and coffee, he is on the boulevards again, searching for a really good pair of goggles, a fur-lined flying cap to replace the hopeless helmet, and a pair of heavy mittens. Old friends, in the uniforms of American subalterns, are everywhere; many wear the stiff-looking wings of the American Flying Corps on their breasts. All are filled with envy to hear that he is leaving for the front; their turn will come before long, but meanwhile the wait grows tiresome.

At length it is train time, and so, hailing a taxi and picking up his bag on the way, Wilkins heads (let us say) for the Gare de l'Est, getting there just in time to reserve a place and squeeze into the dining-car, which is crowded with officers on their way to the front. These are not the embusqué type of officers which he has been accustomed

to in the schools, — clerkish disciplinarians, insistent on all the small points of military observance, — but real fighting men and leaders; grizzled veterans of the Champagne and the Somme, hawk-nosed, keen-eyed, covered with decorations.

Back in his compartment, our pilot dozes through the afternoon, until, just as it has become thoroughly dark, the train halts at Robinet. On the platform, half a dozen pilots of the escadrille, smart in their laced boots and black uniforms, are waiting to welcome the newcomer, and escort him promptly to the mess, where dinner is ready. Dinner over, he is shown to his room — an officer's billet, with a stove, bathtub, and other unheard-of luxuries.

Next morning, one of his new comrades calls for Wilkins, presents him to the captain, who proves very chic and shows him his machine, which has just

been brought out from the dépôt. The armorer is engaged in fitting a Vickers gun on it, so Wilkins spends the rest of the day at the hangar, sighting the gun, adjusting his belt, installing altimeter, tachometer, and clock.

An hour before sundown all is ready; so the American climbs into his seat for a spin, fully aware that many appraising eyes will watch his maiden performance. Off she goes with a roar, skimming low, over the field, until her full speed is attained, when the pilot pulls her up in a beautiful "zoom," banking at the same time to make her climb in a spiral. Up and up and up, her motor snarling almost musically — and suddenly she stops, quivers, and plunges downward, spinning. A hundred yards off the ground she straightens out magically, banks stiffly to the left, skims the hangars, and disappears. The mechanicians watching, hands on hips, below,

nod to one another in the French way. "Il marche pas mal, celui-là," they say — high praise from them.

Wilkins, meanwhile, has flown down the river, to where a target is anchored in a broad shallow. Over it he tilts up and dives until the cross hairs in his telescopic sight center on the mark. "Tut-tut-tut," says the Vickers, and white dashes of foam spring out close to the canvas. He nods to himself as he turns back toward the aerodrome.

At dinner there is much talk, as the weather has been good. A—— and L—— had a stiff fight with a two-place Hun, who escaped miraculously, leaving their machines riddled with holes. M—— had a landing cable cut by a bullet; J—— had a panne, and was forced to land uncomfortably close to the lines. At eight o'clock an orderly comes in with the next day's schedule: "Wilkins: protection patrol at 8 A.M."

The French have not the English objection to "talking shop," and over the coffee the conversation turns to the difficulties of bringing down Huns and getting them officially counted — "homologue" the French call it. The great airmen, of course, — men like Bishop, Ball, Nungesser, and Guynemer, — get their thirty, forty, or fifty Boches; but nevertheless it is a very considerable feat to get even one, and growing harder every day. Nearly all the German hack-work — photography, reglage of artillery, observation, and so forth — is now done by their new two-seaters, very fast and handy machines and formidable to attack, as they carry four machine-guns and can shoot in almost any direction. Most of the fighting must be done in their lines; and far above, their squadrons of Albatross single-seaters watch ceaselessly for a chance to pounce unseen.

Add to this the fact that, to get an

official count, the falling Hun must be checked by two independent observers, such as observation-balloon men, and you can see that it is no easy trick.

Just before bedtime, the leader of the morning's patrol explains the matter to Wilkins. The rendezvous is over a near-by village at three thousand feet. Wilkins is to be last in line on the right wing of the V, a hundred yards behind the machine ahead of him. Signals are: a wriggle of the leader's tail means, "Open throttles, we're off"; a sideways waving of his wings means, "I'm going to attack; stand by"; or, "Easy, I see a Boche."

After a not entirely dreamless sleep and a cup of coffee, our hero is at the hangars at 7.30, helping his mechanic give the "taxi" a final looking over. At 8 he takes the air and circles over the meeting-place till the V is formed. Just as he falls into his allotted station the leader, who has been flying in great cir-

cles, throttled down, wriggles his tail, opens the throttle wide, and heads for the lines, climbing at a hundred miles an hour.

Wilkins is so busy keeping his position that he has scarcely time to feel a thrill or to look about him. Suddenly, from below comes a vicious growling thud, another, and another: *Hrrrump, hrrrump, hrrrump.* He strains his head over the side of the fuselage. There below him, and horribly close, he thinks, dense black balls are springing out — little spurts of crimson at their hearts. The patrol leader begins to weave about to avoid the "Archies," banking almost vertically this way and that in hairpin turns, and poor Wilkins, at the tail end, is working frantically to keep his place. He has never seen such turns, and makes the common mistake of not pulling back hard enough when past forty-five degrees. The result is that he loses height in a

side-slip each time, and gets farther and farther behind his man.

Meanwhile, far up in the blue, their shark-like bodies and broad short wings glimmering faintly in the upper sunlight, a patrol of Albatross monoplaces is watching. Thousands of feet below, close to the trenches, they see the clumsy photographic biplaces puffing back and forth about their business. Above these, they see the V of Spads turning and twisting as they strive to stay above the photographers they are protecting. But wait, what is wrong with the Spad on the right end of the V — a beginner surely, for at this rate he will soon lose his patrol? As if a silent signal had been given, five Albatrosses detach themselves from the flock, and reducing their motors still more, point their sharp noses downward, and begin to drift insensibly nearer.

Wilkins has been having a tough time of it, and at last, in a three-hundred-foot

wing-slip, has lost his comrades altogether, and is flying erratically here and there, too intent and too new at the game to watch behind him. Suddenly, two sparks of fire like tiny shooting stars whizz by him, a long rip appears in the fabric of his lower wing, and next moment, clear and unmistakable, he hears, "Tut, tut, tut, tut." He nearly twists his head off, and perceives with horror that five sinister forms, gray, sharp-snouted, and iron-crossed, are hemming him in, above, below, behind. His thoughts, which occupy possibly a second and a half, may be set down roughly as follows: "Five Boche single-seaters — too many — must beat it — how? Oh, yes — climb in zigzags and circles, heading for our lines."

Leaving Wilkins for a moment, I must tell you a curious thing which shows that men have much in common with dogs. You know how, in his own yard, a fox-terrier will often put a mastiff to flight —

and a fox-terrier, at that, who fears for his life when he ventures on the street? The same thing applies to flying — over the German lines you have a sort of a small, insignificant feeling, look at things pessimistically, and are apt to let your imagination run too freely. The minute you are over friendly country, that changes: your chest immediately expands several inches, you become self-assertive, rude, and over-confident. Thus Wilkins.

In a wild series of zooms and half-spirals, to throw off his pursuers' aim, he reaches his own lines safely, and finds that all but one Albatross have given up the chase. One of them, possibly a beginner anxious for laurels, is not to be thrown off; so the American resolves to have a go at him.

They are at twelve thousand feet. The German is behind and slightly below, maneuvering to come up under the Spad's

tail. A second's thought, and Wilkins banks sharply to the left, circles, and dives before the Boche has realized that it is an air-attack. With the wind screaming through his struts, he sees the enemy's black-leather helmet fair on the cross hairs of the telescope, and presses the catch of the gun. A burst of half a dozen shots, a pull and a heave to avoid collision. As he rushes past the Albatross, he sees the pilot sink forward in his seat; the machine veers wildly, begins to dive, to spin. Good God — he's done it — what luck — poor devil!

And that night at mess, Wilkins stands champagne for the crowd.

Young H—— has had another wild time. He ran across a very fast German two-seater ten miles behind our lines, fought him till they were twenty miles inside the Boche lines, followed him down to his own aerodrome, circled at fifty feet in a perfect hail of bullets, killed

the Hun pilot as he walked (or ran) from machine to hangars, riddled the hangars, rose up, and flew home.

He shot away over four hundred rounds — a remarkable amount from a single-seater bus, as the average burst is only five or six shots before one is forced to maneuver for another aim.

On a raw foggy day, in the cozy living-room of our apartment, with a delicious fire glowing in the stove, and four of the fellows having a lively game of bridge, one is certainly comfortable — absurdly so. Talk about the hardships of life on the front!

The mess is the best I have seen, and very reasonable for these times — a dollar and a half per day each, including half a bottle of wine, beer, or mineral water at each meal. A typical dinner might be: excellent soup, entrée, beefsteak, mashed potatoes, dessert, nuts, figs, salad. While

no man would appreciate an old-fashioned home-type American meal more than I, one is forced to admit that the French have made a deep study of cookery and rations designed to keep people in the best shape. There is a certain balance to their meals — never too much concentrated, starchy, or bulky food. The variety, considering the times, is really wonderful. Breakfasts my pal and I cook ourselves, occasionally breaking out some delicacy such as kidneys en brochette.

We have an amusing system of fines for various offenses: half a franc if late for a meal; a franc if over fifteen minutes late; half a franc for throwing bread at the table; half a franc for breaking a tail-skid (on a "cuckoo"); a franc for a complete smash; a franc and a half if you hurt yourself to boot; and so on. A fellow hit a tree a while ago, had a frightful crash, and broke both his legs. When he leaves the hospital, the court will decide this

precedent and probably impose on him a ruinous fine.

Of course no one ever pays a fine without passionate protests; so our meals are enlivened by much debate. As we have a very clever lawyer and a law student almost his equal, accuser and accused immediately engage counsel, and it is intensely entertaining to hear their impassioned arraignments and appeals to justice and humanity: deathless Gallic oratory, enriched with quotations, classical allusions, noble gestures; such stuff as brings the Chamber to its feet, roaring itself hoarse; and all for a ten-penny fine!

A good bit of excitement lately, over uniforms. In aviation, one knows, there is no regulation uniform: each man is supposed to wear the color and cut of his previous arm. The result is that each airman designs for himself a creation which he fondly believes is suited to his style of soldierly beauty — and many of

these confections have n't the slightest connection with any known French or Allied uniform. One may see dark-blue, light-blue, horizon-blue, black, and khaki; trousers turned up at the bottom; open-front tunics (like a British officer), and every variety of hat, footwear, and overcoat.

I, for instance (being in the Foreign Legion), wear khaki, open-fronted tunic, a very unmilitary khaki stock necktie, Fox's puttees, and United States Army boots. Naturally, I have to duck for cover whenever I see the general loom up in the offing; for he is a rather particular, testy old gentleman, very military, and can't abide the "fantaisies" of the aviator tribe. Lately he has caught and severely reprimanded several of the boys; so I guess that I shall have to have the tailor make certain unfortunate changes in my garments.

The weather of late has been wretched

for flying. A low, frosty mist hangs over the countryside; the trees, especially the pines, are exquisite in their lacy finery of frost. The few days we have of decent weather are usually interesting, as the Hun ventures over chez nous to take a few photographs, and with a little luck the boys are able to surprise him into a running fight. At night, when the tired war-birds buzz home to roost, a crowd of pilots and mechanics gathers before the hangars. All gaze anxiously into the northeastern sky. The captain paces up and down — though he has flown four hours, he will not eat or drink till he has news of his pilots. Jean is missing, and Charlot, and Marcel. Night is drawing on — the sky flushes and fades, and faces are growing just a trifle grave.

Suddenly a man shouts and points, — Jean's mechanician, — and high up in the darkening east we see three specks — the missing combat patrol. Next moment

the hoarse drone of their motors reaches our ears; the sound ceases; in great curving glides they descend on the aerodrome. We hear the hollow whistling of their planes, see them, one after another, clear the trees at ninety miles an hour, dip, straighten, and rush toward us, a yard above the grass. A slight bumping jar, a half-stop, and each motor gives tongue again in short bursts, as the pilots taxi across to the hangars, snapping the spark on and off.

Then a grand scamper to crowd around our half-frozen comrades, who descend stiffly from their "zincs," and tell of their adventures, while mechanics pull off their fur boots and combinations. Other "mecanos" are examining the machines for bullet- and shrapnel-holes — often a new wing is needed, or a new propeller; sometimes a cable is cut half through. Snatches of talk (unintelligible outside the "fancy") reach one; we, of course,

know only the French, but the R.F.C. stuff is equally cryptic.

"Spotted him at four thousand eight, 'piqued' on him, got under his tail, did a chandelle, got in a good rafale, did a glissade, went into a vrille, and lost so much height I could not catch him again."

An R.F.C. man would say, "Spotted him at forty-eight hundred, dove on him, got under his tail, did a zoom, got in a good burst, did a side-slip, went into a spin," etc. I may say that "chandelle" or "zoom" means a sudden, very steep leap upward (limited in length and steepness by the power and speed of the machine). Some of our latest machines will do the most extraordinary feats in this line — things that an old experienced pilot in America would have to see to believe. A "glissade" is a wing-slip to the side, and down; a "vrille" is a spinning nose-dive.

Among the younger pilots are several who entertain spectators with all sorts

of acrobatic feats over the aerodrome. A fine exhibition of skill and courage, but foolish at times — especially after a fight, when vital parts may be dangerously weakened by bullet-holes. Too much acrobacy strains and weakens the strongest aeroplane. I believe in doing just enough to keep your hand in, as in fights you are forced to put enough unusual stresses on your bus.

I hope to know very soon whether or not we are to be transferred to the American army. The long delay has worked hardships on a good many of us, as of course no pilot could begin to live on the pay we get. The Franco-American Flying-Corps fund (for which, I believe, we must thank the splendid generosity of Mr. Vanderbilt) has helped immensely in the past, but some of the boys are in hard straits now. I hope we shall be transferred, because the pay will make us self-

supporting, and any American would rather be in United States uniform nowadays, in spite of the bully way the French treat us, and our liking for our French comrades, with whom it will be a wrench to part.

The point regarding our present pay is this: all French aviators are volunteers, knowing conditions in the air-service beforehand. Before volunteering, therefore, they arrange for the necessary private funds; if not available, they keep out of flying. We get two and a half francs a day (as against five sous in the infantry), but on the other hand, we are lodged, and forced by tradition to live, like officers. It is fine for the chap who has a little something coming in privately, but tough for the one who is temporarily or permanently "broke."

Our boys are going to do splendid things over here. Everywhere one sees discipline, efficiency, and organization

that make an American's chest go out. The first slackness (unavoidable at the start of a huge and unfamiliar job) has completely disappeared. People at home should know of all this as quickly and as much in detail as expedient: they are giving their money and their flesh and blood, and prompt and racy news helps wonderfully to hearten and stimulate those whose duty is at home.

For myself, there is nowhere and nobody I would rather be at present than here and a pilot. No man in his senses could say he enjoyed the war; but as it must be fought out, I would rather be in aviation than any other branch. A pleasant life, good food, good sleep, and two to four hours a day in the air. After four hours (in two spells) over the lines, constantly alert and craning to dodge scandalously accurate shells and suddenly appearing Boches, panting in the thin air at twenty thousand feet, the boys

are, I think, justified in calling it a day. I have noticed that the coolest men are a good bit let down after a dogged machine-gun fight far up in the rarefied air. It may seem soft to an infantryman — twenty hours of sleep, eating, and loafing; but in reality the airman should be given an easy time outside of flying.

I was unfortunate enough to smash a beautiful new machine yesterday. Not my fault; but it makes one feel rotten to see a bright splendid thing one has begun to love strewn about the landscape. Some wretched little wire, or bit of dirt where it was not wanted, made my engine stop dead, and a forced landing in rough country full of woods and ditches is no joke. I came whizzing down to the only available field, turned into the wind, only to see dead ahead a series of hopeless ditches which would have made a frightful end-over-end crash. Nothing to do but pull her up a few feet and sail over,

risking a loss of speed. I did this, and "pancaked" fairly gently, but had to hit ploughed ground across the furrow. The poor "coucou" — my joy and pride — was wrecked, and I climbed, or rather dropped, out, with nothing worse than a sore head, where the old bean hit the carlingue. Now all the world looks gray, though our captain behaved like the splendid chap he is about it: not a word of the annoyance he must have felt.

The very finest motors, of course, do stop on occasions. Better luck, I hope, from now on.

As the days go by, I find much that is novel and interesting about the aerial war, which in reality is quite different from any idea of it that I had had. I will try to give a rough idea of how the upper war is carried on.

The trenches, sometimes visible, often quite invisible from the heights at

which one flies, form the dividing line between us and the Boche. Behind them, at distances of from seven to fifteen miles, are the aerodromes — a few acres of tolerably flat land, three or four or half a dozen hangars (often cleverly camouflaged), barracks, and sheds for automobiles. Each side, of course, knows pretty well the locations of the enemy aerodromes. This gives rise to a certain amount of give and take in the bombing line, which, in the end, accomplishes very little.

It is a curious fact that in certain sectors the aviator's life is made miserable by this ceaseless bombing, while in other places a species of unwritten understanding permits him to sleep, at least, in peace. I have a friend in a far-off escadrille who has to jump out of bed and dive for the dugouts nearly every clear night, when the sentry hears the unmistakable Mercedes hum close over-

head, the shutting off of the motor, and the ominous rush of air as the Huns descend on their mark. He knows that the Germans get as good as, or better than they give — but the knowledge does not make up for lost sleep. In my sector, on the other hand, we could blow the Boche aerodromes to atoms and they could probably do as much for us, but neither side has started this useless "strafing." Just before an attack, such bombing might be of military value; otherwise it only harasses vainly men who need what sleep they get, and destroys wealth on both sides, like exchanging men in checkers without profiting in position. I have heard parlor warriors at home say, "By all means make war as unpleasant as possible — then it won't happen again." But there is a limit to this, when nothing of tactical value is accomplished.

The aerodromes are the headquarters

of the different squadrons, each of which is specialized in some type of work. Military aviation divides itself into certain groups, requiring different types of machines and different training for pilot or observer. These groups are day-bombing, night-bombing, observation, photography, artillery fire-control, and chasse. I would like to tell you all about the different buses used, but of course one is not at liberty to do so. In general, bombing-machines are rather large two-seaters or three-seaters, designed to rise to great heights, where they are very fast, and capable of carrying heavy loads for long distances. They are, naturally, well armed, but depend (for safely carrying out their missions) principally on their speed at altitudes of eighteen thousand feet or more. Photography, observation, and artillery control machines, on the other hand, must be fast at lower altitudes, handy in a fight, and speedy climbers.

They are, so far as I know, always two-seaters, and are really the most important of all aeroplanes. I believe that all the allied designers should work together to produce a single uniform type of two-seater — small, quick to maneuver, and very fast up to fifteen or sixteen thousand feet. Such machines, flying about their work in small groups, are truly formidable things for single-seater scouts to attack, as they are nearly as fast and handy, and have the enormous advantage of being able to shoot backward as well as forward. With light double-controls for the machine-gun man or observing officer (who would take a few lessons in emergency flying), they could not be brought down by killing the pilot—a most valuable feature.

The Boches have such machines, — particularly the Rumpler, — which are tough nuts to crack, even when outnumbered. Two of our boys had a run-

ning fight with a Rumpler recently, and dove at him alternately for thirty minutes over forty miles of country. Both were nearly brought down in the process — and they failed to bag the enemy machine, though at the last they did for the observer. This shows the great value of the fast two-place bus. I doubt if people at home are aware of the difficulties of designing a two-seater which one could pronounce, without hesitation, the best. It must have four major qualities: speed, climbing ability, diving speed, and handiness. The need of strength, or high factor of safety, goes without saying. Speed is simply a matter of power and head resistance, and is comparatively easy to attain alone; the rub comes in combining with it the requisite climbing power, and factor of safety. The Germans, in general, seem to believe in a very heavy, substantial motor, which cuts their climbing to a certain extent, but

gives them a very fast dive. The Allies' machines, I should say, are slightly faster climbers, but cannot follow a diving Hun. And so it goes — to have one quality in perfection, another must be sacrificed.

Last of all come the single-seaters, whose sole purpose is to fight. Many different types have been tried — monoplanes, biplanes, and triplanes, with different kinds of fixed and rotary motors. At present the biplane seems to have it (though I have seen an experimental monoplane that is a terror), as the monoplane is by nature too weak, and the triplane (magnificent otherwise!) is too slow in diving for either attack or escape.

The work the different groups perform seems to be roughly the same in the Allied and enemy armies. The day-bombers fly at great heights, sometimes escorted and protected by single-seaters. The night-bombers fly fairly low, never escorted. Photographers, observers, and

artillery regulators have a nasty job, as they must fly rather low, constantly subjected to a galling attention from old Archibald. When their mission requires it, they are escorted by chasse machines — a job that single-seater pilots do not pine for, because they often go twenty or thirty miles into "Bochie," where motor-trouble means a soup diet till the end of the war; and because, at low altitudes, hovering over a slow "cuckoo," the anti-aircraft gunners have too good a time.

The single-seaters may be divided into two classes: the first does escort work about half the time, the second does nothing but parade up and down the lines, hunting for trouble. The last are the élite among airmen. Unfortunately I am not one of them, as they are recruited only from tried and skillful pilots. As to fighting, there is a good deal of popular misconception. One imagines picturesque duels to the death, between A (the

great French or English ace) and X (his German competitor) — the multitude of straining, upturned eyes, the distant rattle of shots, the flaming spin of the loser. As a matter of fact, a duel between two monoplaces, handled by pilots of anything like equal skill, who are *aware of each other's presence*, is not unlikely to end without bloodshed. Bear in mind that they can shoot only forward, that the gun must be aimed by aiming the whole machine (to which it is fixed immovably), and that a twisting, climbing, banking aeroplane, traveling at over one hundred miles per hour, is no joke to hit in its small vitals, and you can see that this must be so.

The truth is, that the vast majority of fights which end in a victory are between scouts and two-seaters, and that it needs two scouts to attack one biplace with anything like even chances of winning. Think a moment. The two-

seater is nearly as fast and handy as you are; he can therefore avoid you and shoot forward almost as well, and in addition, he has a man astern who can shoot up, sideways, and backwards with most superior accuracy. This disconcerting individual, it is true, cannot shoot straight down when the wings are horizontal, but to enable him to do so, the pilot has only to tilt the machine to the necessary angle.

Now, suppose two French monoplaces sight an Iron-Crossed two-seater. Flying at sixteen thousand feet, they see French shrapnel in white puffs bursting below them at two thousand feet, and several miles away. They change their course, and presently, dodging in and out among the fleecy balls, they espy a fast biplace, heavily camouflaged in queer splotches of green, brown, and violet. Coming nearer, they make out the crosses — ha, a Boche! Nearer and nearer they come, till they are four hundred yards behind

and six hundred feet above the enemy, who has seen them and is making tracks for home. Three hundred yards, by the way, is the closest one may safely approach a machine-gun in the air. At this point A dives on the Boche to about two hundred and fifty yards, shoots a short burst, and veers off. The German machine-gunner lets him have a rafale, but meanwhile B has dived under and behind the enemy's tail. There he stays, at a fairly safe distance, with his eye on the rudder above him, ready to anticipate the banks which might enable the gunner to get in a burst. As soon as A sees that B is beneath the Boche, he dives and shoots again. The gunner is in a quandary — if he aims at A, B will slip up and forward, rear his machine into position, and deliver a possibly deadly burst. If he devotes his attention to B, A will be safe to make a dive to dangerously close quarters. There you have the theory of

the most common of all attacks — but in reality it is more difficult than it sounds. The three machines are traveling at great speed, and constantly twisting, rearing, and diving. It is the easiest thing in the world to pass another plane, turn to follow it, and see nothing, no matter how you strain your eyes. In passing, your combined speed might be roughly *one hundred and twenty yards per second*, and you are both moving in three dimensions. The object for which you search may be to the side, ahead, above, below; and every second of your search may be increasing its distance at enormous speed.

It is bitterly cold, and I am sitting in our cozy mess-room waiting for lunch, which is at twelve. A dense fog hangs over the aerodrome, and the trees are beautifully frosted.

Just had word that a boy who was at Avord in my time has bagged one of the "Tangos" — no mean feat. It is the

crack escadrille of all Germany — Albatross DIII's, driven by the pick of the Hun fighting pilots, and commanded, I believe, by Von Richthofen — the most famous of German aces. They are a formidable aggregation, recognizable by rings of tango red around their Iron Crosses, and stripes of the same color along the fuselage. For a young pilot to bring one of these birds down in one of his first flights over the lines is a wonderful piece of luck and skill.

On days (like to-day) when the weather makes flying impossible, the fellows sleep late, make a long, luxurious toilet, breakfast, and stroll down to the hangars, where they potter around their "zincs," feeling over the wires, adjusting the controls, tinkering their machine-guns, or perhaps fitting on some sort of new trick sight. Sights are a hobby with every pilot and nearly every one has different ideas on the subject, advocating telescopic or

open, one or two-eye outfits. Then, if one is extra careful, he takes out the long belt of cartridges, feels each bullet to make sure it is tightly crimped in the shell, and pushes and pulls the shells until all are exactly even. "Jams" are the curse of this game, and no amount of trouble is too much, if it insures a smooth working gun. Some jams can be fixed in the air, but others render you defenseless until you can land.

Each pilot has his own mechanic, who does nothing but look after his bus, and is usually a finished comedian in addition to being a crack mechanic. In truth, I never ran across a more comical, likable, hard-working crew than the French aviation mechanics. They are mostly pure Parisian "gamins" — speaking the most extraordinary jargon, in which everything but the verbs (and half of them) is slang, of the most picturesque sort. Quick-witted, enormously interested in their

work, intelligent and good-natured, they are the aristocrats of their trade, and know it. You should see them when they go on leave. Jean or Charlot, ordinarily the most oily and undignified of men, steps out of the squadron office arrayed in a superb blue uniform, orange tabs on his collar, a mirror-like tan belt about his waist — shaven, shorn, shining with cleanliness, puffing an expensive-looking, gilt-banded cigar. Is it fancy — or is there a slight condescension in his greeting? Well, it is natural — you can never hope to look so superbly like a field-marshal. A little crowd of pals gathers around, for it is just after lunch; and presently the motor-bus draws up with a scream of brakes and a cloud of dust. The motor has "AV" in big letters on the side, and its driver (not to be confounded with any mere ambulance or lorry chauffeur) would feel it a disgrace to travel under forty miles an hour, or to make anything but the most

spectacular of turns and stops. The driver produces a silver cigarette case, passes it round, takes a weed, taps it on his wrist, and chaffs the permissionnaire about a new godmother on whom he is planning to call in Paris.

Presently the captain steps out of his office; the departing one spins about, head back and chest out, cigar hidden in his left hand; "click" — his heels come together magnificently, and up goes his right hand in a rigid salute. Smiling behind his mustache, our extremely attractive captain salutes in return, and shakes Charlot's hand warmly, wishing him a pleasant leave. He is off, and you can picture him to-morrow strolling with princely nonchalance along the boulevards. What if he earns but five cents a day — he saves most of that, and his pilot presents him with a substantial sum every Saturday night, all of which is put away for the grand splurge, three times a year.

In Paris, you will recognize the type — well dressed in neat dark blue, orange collar with the group number on it, fingernails alone showing the unmistakable traces of his trade, face, eyes and manner registering interest and alert intelligence. As likely as not you see him on the terrace of some great café — a wonderfully smart little midinette (his feminine counterpart) beside him, with shining eyes of pride — and at the next table a famous general of division, ablaze with the ribbons of half a dozen orders.

The "mecanos" dress as nearly like pilots as they dare, and after flying is over in the evening are apt to appear about the hangars in the teddy-bear suits and fur boots of the "patron." Some funny things happen at such times. There is a class of officers, called "officers of administration," attached to squadrons and groups of aviation, who do not fly, but look after the office and business end

of the équipe. They are worthy men and do absolutely necessary work, but somehow are not very swank.

One day it became known that the revered Guynemer was to visit a certain escadrille, and naturally all the officers were on fire to shake the hero's hand — a reminiscence to hand down to their children's children. The administration officer — a first lieutenant — was late in getting away from the bureau, and when he got to the field, Guynemer had landed, left his machine, and gone to have the sacred apéritif of five o'clock. Meanwhile, the chief comedian of all the mechanics, dressed by chance in his pilot's combination and boots, and proud to tinker (with reverent fingers) the famous Spad, had run out to where it stood, filled it with gas and oil, touched up the magneto, and cleaned a couple of plugs. The officer, as he came to the hangars, perceived the well-known "taxi," with the stork on its

side, and a furry figure strolling towards him. A snap of heels, the position of attention, and he was saluting (as he thought) one of the most glorious figures of France. The comedy mechanician — taking in the situation at a glance — strolled magnificently by, with a careless salute and a nod. The officer never inquired who it was he had saluted — but what a tale to pass around the barrack stove on winter evenings! Mistaken for Guynemer! Saluted by a two-striper!

In clothes and get-up the mechanics follow the pilots' lead, but in language the situation is reversed — we take pride in memorizing, chuckling over, and using at every opportunity the latest word or phrase invented by these gifted slangsters. An aeroplane is never "avion" or "appareil," but "zinc," "taxi," or "coucou." Motor is "moulin" — to start it, one "turns the mill." In the aviation, one does not eat, one "pecks." One is not

killed — one "breaks one's face," though face is not the inelegant word in use. Gasoline is "sauce"; to open the throttle, you "give her the sauce." A motor breakdown is not, as in the automobile service, a "panne," but a "carafe" — heaven knows why! and so on.

Life out here is in many ways a contrast to the last six months. Though only a beginner, a bleu, I am Somebody, through the mere fact of being a pilot, and most of all a pilote de chasse — a most chic thing to be. I must dress well, shave daily, wear my hair brushed straight back and long, — in contrast to all other branches of the army, — have my boots and belt polished like a mirror, and frequent only the best café in town. These are, of course, unwritten rules, but sternly lived up to — and I confess that the return of self-respect, after months of dirt and barrack life, is not unpleasant.

Our escadrille, composed of ten French

pilots, two Americans, and the officers, is really a very decent crowd of chaps of good family and education. Frenchmen of this kind are good fellows and pleasant companions, differing from us only on certain racial points of outlook and humor. Among them are two lawyers (with all the French lawyer's delicate wit, irony, and love of play on words), a large wine-grower (if you can grow wine), a professional soldier from Morocco, a medical student, and my room-mate, a most attractive chap, an English public-school man, whose family are French importers in London. He has been nearly everywhere, is absolutely bi-lingual, and is the sort of man who is at home in any kind of company.

From time to time, of course, some one is brought down, and though I dislike it intensely, one feels that decency demands one's presence at the funeral. Elaborate, rather fine ceremony usually,

where the Gallic emotional nature appears at its best. At the last one, for instance, the captain (brave as a lion, and a man to his finger-tips) was overcome in the midst of his speech of eulogy and burst into tears. Impossible to an Anglo-Saxon, but to me there was something very fine in the sight of this splendid officer, frankly overcome with grief at the loss of one of his men. When the ceremony is over, each pilot and friend comes to pay respect to the departed comrade, takes up in turn an implement shaped like an Indian-club, dips it in holy water, makes a sign with it over the coffin, draped in the Tri-color, and sprinkles a few drops of water on the flag.

At our mess, we have queer little things of glass to rest knife and fork on, while the dishes are being changed; and last night at dinner, when the captain's orderly assigned one pilot to a particularly ticklish mission, an irrepressible Ameri-

can youth who was dining with us picked up one of these knife-rests (shaped exactly like a holy-water sprinkler), stood up very solemnly, made the sign over his victim, and sprinkled a few drops on his head. Amid roars of laughter every one at the table stood up in turn and did likewise. A harmless joke to us, but I am not sure of its good taste to a Frenchman.

If I had known France before the war I could decide better a question that constantly occurs to me: "Has France grown more religious with war?" The educated Frenchman is certainly the most intelligent, the most skeptical, the least inclined to take things on trust of all men, yet on the whole I am inclined to believe that religious feeling (by no means orthodox religion) has grown and is growing. In peace times, death seems a vitally important thing, to be spoken of with awe and to be dreaded, perhaps as the end of the game, if you chance to be a materialist.

All that is changed now. You go to Paris on leave, you spend two or three days delightfully with Bill or Jim or Harry, a very dear friend, also in on leave from his battery, regiment, or squadron.

A week later some one runs up to you with a long face. "Bill got crowned on Thursday," he says; "joined a Boche patrol by mistake and brought down before he saw the crosses. Poor old cuss." You sigh, thinking of the pleasant hours you have passed with Bill — your long talks together, his curious and interesting kinks of outlook, the things which make personality, make one human being different from another. Somehow your thoughts don't dwell on his death as they would in peace-times — a week or a month later your mind has not settled into taking for granted his non-existence. Next time you visit Paris, you hasten to his former haunts — half expecting to find him ab-

sorbing a bock and expounding his peculiar philosophy.

Is there a life after death? Of course there is — you smile a little to yourself to think you could ever have believed otherwise. This, I am confident, is common experience nowadays. The belief that individuality ceases, that death is anything but a quick and not very alarming change, is too absurd to hold water. It is a comforting thought and gives men strength to perform duties and bear losses which in ordinary times would come hard.

I have just been made popotier — I don't know what you call it in English, but it means the individual who attends to the mess: buys provisions, wine, and so forth, makes out menus, keeps accounts, and bosses the cook. A doubtful honor, but one of which I am rather proud when I think that a crowd of French officers

have entrusted to me the sacred rites of the table. I was never much of a gourmet, but what little I know stands me in good stead.

To-day was the occasion of the first considerable feast under my régime — a lunch given by the officers of our squadron to some distinguished French visitors. The cook and I held long and anxious consultations and finally turned out a meal on which every one complimented us: excellent hors d'œuvres, grilled salmon steaks, roast veal, asparagus, and salad. A dry Chablis with the fish and some really good Burgundy with the roast. Not bad for the front, really.

I give the cook each night enough money for the next day's marketing. The following evening he tells me the amount of the day's expenses, which sum I divide by the number present, giving each man's share for the day. Very simple.

Since I got my new machine I have

become a genuine hangar-loafer. It is so delicate and complicated that my unfortunate mechanics have to work practically all the time to keep me going. The only way to get the work done well is to know about it yourself; and so, against my instincts, I have been forced for the first time to study the technical and mechanical side of my bus.

Some say, "The pilot should never know too much about his machine — it destroys his dash." Perhaps they are right — certainly a plunge into this maze of technicalities destroys his sleep — there is an unwholesome fascination about it: hundreds of delicate and fragile parts, all synchronized as it were and working together, any one of which, by its defection, can upset or even wreck the whole fabric. A simple motor-failure, even in our own lines and at a good altitude, is no joke in the case of the modern single-seater. Small and enormously heavy for

its wing-surface, it first touches ground at too high a speed for anything but the longest and smoothest fields. In pannes of this sort, the pilot usually steps out of the most frightful-looking wreck smiling and quite unhurt; but you can scarcely imagine the chagrin and depression one feels at breaking a fine machine. I did it once, and it made me half sick for a week, though it was not really my fault at all.

After lunch, instead of taking a nap as one does when on duty at daybreak, I go to the "bar" to read letters and papers and see friends from the other squadrons. As I go in the door, five friends in flying clothes go out.

"See you in two hours," says Lieutenant D——. "Let's have a poker game; I've got a patrol now."

"All right," I say, "I'll be here" — though I'm not very keen on French poker, which is somewhat different from ours.

The two hours pass in a wink of time as I lie in a steamer-chair, reading and reveling in the warm drowsy May afternoon. A sound of motors, the hollow whistling rush of landing single-seaters, and I glance out of the door. Here they come, lumbering across the field — but only four. I get up hastily and run to where the flight-commander is descending stiffly from his bus. His face is long, as we crowd around.

"Where's D——?" I ask anxiously.

"Brought down, I'm afraid," he answers. "We chased some two-seaters twenty-five miles into the Boche lines, and nine Albatrosses dropped on us. Got two of them, I think; but after the first mix-up, I lost track of D——, and he did n't come back with us."

A melancholy little procession heads for the bar, and while the affair is being reëxplained, the telephone rings.

"Lieutenant D—— has been found

at X——. He was shot through the chest, but managed to regain our lines before he died. He was on the point of landing in a field when he lost consciousness. The machine is not badly smashed."

At a near-by table, a dice game, which started after lunch and has been interrupted to hear the news, continues. I resume my place in my chair and spread out the Paris "Herald" — unable to focus my mind on the steamship arrivals or the offensive. Poor old D—— !

We have had lovely weather for the past fortnight — long warm days have made the trees burst into leaf and covered the meadows with wild-flowers. The quail have begun to nest — queer little fellows, quite unlike ours, whose love-song is, "*Whit*, twit, whit," with a strong emphasis on the first "whit."

Sometimes, at night, a nightingale, on a tree outside my window, charms

me to wakefulness with his dripping-sweet music.

These are strenuous days — I have done nothing but fly, eat, and sleep for a fortnight. Our "traveling circus" has been living up to its name — going about from place to place with amazing mobility and speed. I have lived for a week with no baggage but the little bag I carry in my plane. It contains one change of light underwear, one pair of socks, tooth-brush, tooth-paste, tobacco, sponge, soap, towel, shaving things, mirror, a first-aid kit, and a bottle of eau de cologne. With this I can weather a few days anywhere until the baggage-trucks catch up.

Our mobility is marvelous — we can receive our orders at daybreak, breakfast, and land in a place a hundred miles away in an hour and a half. Then a little oil and petrol, and we are ready to bounce

something off the local Boche. I could easily write a large calf-bound volume on nothing but my experiences of the past week — one of the most strangely fascinating (in retrospect) of my life, though saddened by the loss of two of our pilots, one an American.

We had no sooner got to this place than we were sent out on a patrol — six of us, with a French lieutenant, a special friend of mine, as flight-commander. None of us had flown before in this sector, and a young American (S——, of New York) was making his second flight over the lines. The weather was wretched, thick, low-hanging clouds with a fine drizzle of rain — visibility almost zero. While mechanics filled the machine, I pored over my map till I had all necessary landmarks thoroughly in mind. At last the captain glanced at his watch and shouted, "En voiture!"

I climbed into my tiny cockpit, loaded

my gun with a snap of the lever, wiped the sights free of moisture, and sank back in my seat, while my mechanic adjusted the belt which holds one tight in place. Up went the captain's hand, and almost with a single roar the six motors started. One after another we rushed across the field, rose to the low ceiling of the clouds, and swept back, bunched like a flock of teal. The flight-commander's head, a black leather dot in his cockpit, turned swiftly for a glance back. All there and well grouped; so he headed for the lines, flying so low that we seemed to shave the spires of village churches. Soon the houses ceased to have roofs — we were over the front.

A great battle was raging below us — columns of smoke rose from the towns and the air was rocked and torn by the passage of projectiles. Far and near the woods were alive with the winking flash of batteries. Soon we were far into the

German lines; deep coughs came from the air about us as patches of black sprang out. But we were too low and our speed was too great to be bothered by the Boche gunners. Suddenly the clouds broke for an instant, and across the blue hole I saw a dozen Albatrosses driving toward us — German single-seaters, dark ugly brutes with broad short wings and pointed snouts. Our leader saw them too, and we bounded upward three hundred feet, turning to meet them. The rest happened so swiftly that I can scarcely describe it coherently. Out of the tail of my eye I saw our leader dive on an Albatross, which plunged spinning to the ground. At the same instant I bounded upward to the clouds and dropped on a Boche who was attacking a comrade. I could see my gun spitting streams of luminous bullets into the German's fuselage. But suddenly swift incandescent sparks began to pour past me, and a

glance backward showed three Albatrosses on my tail. I turned upside down, pulled back, and did a hairpin turn, rising to get behind them. Not a German machine was in sight — they had melted away as suddenly as they came.

Far off to the south four of our machines were heading back toward the lines. Feeling very lonely and somewhat de trop, I opened the throttle wide and headed after them. Just as I caught up, the leader signaled that he was done for, and glided off, with his propeller stopped. Praying that he might get safely across to our side, I fell in behind the second in command. Only four now — who and where was the other? Anxiously I ranged alongside of each machine for a look at its number. As I had feared, it was the American — a hot-headed, fearless boy, full of courage and confidence, but inexperienced and not a skillful pilot. No word of him since. Did he lose the patrol

in a sharp turn and get brought down by a prowling gang of Albatrosses, or did he have motor-trouble which forced him to land in the enemy lines? These are the questions we ask ourselves, hoping for the best.

An hour after we landed at our field, a telephone message came, saying that Lieutenant de G—— had landed safely a thousand yards behind the firing-line, with three balls in his motor.

The captain sent for me. "Take my motor-car," he said, "and go fetch de G——. The machine is in plain view on a hill. I am giving you two mechanics, so do your best to save the instruments and machine-gun. The Boche artillery will probably drop shells on the machine before nightfall."

The trip proved rather a thriller, for at this point the old-fashioned picture-book trenchless warfare was in full blast. Picking up de G——, we hid the car in a

valley and sneaked forward under an unpleasant fire of shrapnel and high explosives. The unconcerned infantry reserves, chaffing and smoking where they lay hidden in fields of ripe wheat, stiffened our slightly shaky nerves. Poor timid aviators, completely out of their element — I heaved a sigh of relief that came from the very soles of my feet when at last our task was done, and with our cargo safely stowed, we sped out of the valley and back toward the rear. Hats off to the infantry!

Next day two of us went patrolling with the captain — a famous "ace" whose courage and skillful piloting are proverbial and who never asked one of his men to do a thing he hesitated to do himself. He was particularly fond of Americans (one of Lufbery's pall-bearers), and on many occasions had done things for me which showed his rare courtesy and thoughtfulness. None of us

dreamed, as he laughed and joked with us at the breakfast-table, that it was his last day of life.

The details of this patrol will always be fresh in my mind. We were flying at about seven thousand feet, the three of us, I on the captain's right. At six thousand, stretching away into the German lines, there was a beautiful sea of clouds, white and level and limitless. Far back, a dozen miles "chez Boche," a flight of Albatrosses crawled across the sky — a roughly grouped string of dots, for all the world like migrating wildfowl. Suddenly, about seven or eight miles in, a Hun two-seater poked his nose above the clouds, rose leisurely into view, and dove back. I was quite sure that he had not seen us. The captain began at once to rise, turning at the same time to take advantage of the sun, and for a few minutes we wove back and forth, edging in till we were nearly over the spot

where the Boche had appeared. At last our patience was rewarded. The Boche emerged from the clouds, seemed to hesitate an instant like a timid fish rising from a bed of seaweed, and headed for the lines, where doubtless he had some reglage or reconnaissance to do.

Our position was perfect — in the sun and well above the enemy. The captain banked vertically and plunged like a thunderbolt on the German, I following a little behind and to one side. At one hundred and fifty yards, streaks of fire poured from his two guns, and as he dove under the German's belly I got into range. Dropping vertically at a speed (I suppose) of two hundred and fifty miles an hour, with the wind screaming through the wires, I got my sights to bear and pulled the trigger. Faintly above the furious rush of air, I could hear the stutter of my gun and see the bullets streaking to their mark. It was over in a wink

of time: as I swerved sharply to the left, I caught a glimpse of the Hun machine-gunner, in a great yellow helmet and round goggles, frantically getting his gun to bear on me. A pull-back and I shot up under his tail, tilted up, and gave him another burst.

But what was this — as I opened the throttle, the engine sputtered and died! I dove steeply at once to keep the propeller turning, realizing in a flash of thought that the long fast dive had made the pressure in my gasoline tank go down. A turn of the little lever put her on the small gravity tank called the "nurse"; but no luck — something was wrong with the valve. Nothing to do but pump by hand, and I pumped like a madman. Seven miles in the enemy lines and dropping like a stone — I was what the French call très inquiet. Three thousand feet, two thousand, a thousand — and I pumped on, visions of a soup-diet

and all the tales I had heard of German scientific food substitutes flashing through my mind. Five hundred; a splutter from the engine, and at two hundred feet above a ruined village she burst into her full roar, and I drew a breath for the first time in the descent. Crossed the lines three hundred feet up with full throttle and the nose down, and did n't get a bullet-hole!

I was unable to find the others, and as my petrol was low I went home. The rest I have from the other pilot.

The captain apparently had the same trouble as I, for he continued his dive to about three thousand feet, followed by the other. The German, when last seen, was diving for the ground, so we shall never know whether or not we got him. Rising again above the sea of clouds, the captain attacked the rear man of a patrol of eleven Albatrosses which passed beneath him. Turning over and

over aimlessly, the Hun fell out of sight into the clouds. At this moment three Boches dove on the captain from the rear — his machine burst into flames and dove steeply toward our lines. Our remaining pilot, hopelessly outnumbered, extricated himself with difficulty and arrived a few minutes after me, his bus riddled with balls. We found the captain's body, just behind the firing-line. He had been killed by three bullets, but had retained consciousness long enough to get to friendly ground before he died. A splendid officer and a true friend, whom we all mourn sincerely.

The past fortnight has been rather stirring for us — constant flying, plenty of fights, and the usual moving about. One gets used to it in time, but at first it is a wrench to a man of my conservative nature and sedentary habits. This time we have struck it rich in a village where

soldiers are still welcome. I have a really charming room in the house of the principal family — well-to-do people who own the local factory. Great sunny south windows, running water, and a soft snowy bed, scented with lavender! A day of rest to-day, as they are installing a new motor in my "taxi"; so I am planted at a little table, looking out through my window on a warm peaceful scene of tiled roofs, rustling leaves, and a delicious sky across which float summery clouds. Not a uniform in sight, not a sound of a cannon — the war seems an impossible dream.

The last day at our old field I had a narrow escape. Two of us were flying together up and down the lines at about four thousand feet. The other chap had allowed me to get pretty far in the lead, when I spied, about two thousand feet below me, a strange-looking two-seater, darkly camouflaged, on which I could see

no insignia. I dove on him, but not headlong, as the English have a machine on similar lines, and it was not until I was quite close that I made out two tiny black crosses *set in circles of orange*. By this time the machine-gunner was on the alert, and just as I was going to give him a burst, *flac*, *flac*, *flac*, bullets began to pass me from behind. Holes suddenly appeared in my wings; in another moment whoever was shooting would have had me, so I rose steeply in a sharp turn, saw nothing, turned again and again, and finally, disappearing in the distance after the two-seater, I made out two little Pfalz scouts, painted dark green.

My comrade, who was having engine trouble, saw the whole thing. The Boche single-seaters were well behind the larger plane they were protecting, — somehow I missed seeing them, — and when I dove at their pal they rose up under my tail and let me have it with their four guns.

Only some rotten shooting saved me from being brought down. The hardest thing for a new pilot to learn is the proper combination of dash and wariness: neither produces results alone; both are absolutely essential. One must bear in mind two axioms: first, bring down the enemy; second, don't get brought down yourself. A disheartening number of young pilots, full of dash and courage, trained at great expense to their country, get themselves brought down on their first patrol, simply because they lack skill and the necessary dash of wariness. A good general does not ordinarily attack the enemy where he is strongest.

Our field was deserted: the mechanics were packing to leave, and my machine — old Slapping Sally — stood mournfully in the corner of a hangar. I stowed my belongings in the little locker at my side, had her wheeled out, adjusted my maps, and in five minutes was off on my long

trip over unknown country. Our maps are really marvelous. With the compass to check up directions of roads, railroads, canals, and rivers, one can travel hundreds of miles over strange country and never miss a crossroad or a village. If, however, you allow yourself to become lost for an instant, you are probably hopelessly lost, with nothing to do but land and locate yourself on the map.

When I left, there was a gale of wind blowing, with spits of rain; and in fifteen minutes, during which I had covered forty miles, the clouds were scudding past at three hundred feet off the ground, forcing me at times to jump tall trees on hills. A bit too thick. Seeing a small aerodrome on my right, I buzzed over and landed, getting a great reception from the pilots, who had never examined one of the latest single-seaters. It is really comical, with what awe the pilots of slower machines regard a scout. They

have been filled full of mechanics' stories about "landing at terrific speed — the slightest false movement means death," and the like; whereas in reality our machines are the easiest things in the world to land, once you get the trick.

In a couple of hours the weather showed signs of improvement, so I shook hands all round and strapped myself in. To satisfy their interest and curiosity, I taxied to the far edge of the field, headed into the wind, rose a yard off the ground, gave her full motor, and held her down to within thirty yards of the spectators, grouped before a hangar. By this time Sally was fairly burning the breeze — traveling every yard of her one hundred and thirty-five miles an hour; and as my hosts began to scatter, I let her have her head. Up she went in a mighty bound at forty-five degrees, nine hundred feet in the drawing of a breath. There I flattened her, reduced the motor, did a couple of "Im-

melman turns" (instead of banking, turn upside-down, and pull back), and waved good-bye. Rather childish, but they were good fellows, and really interested in what the bus would do.

All went well as far as Paris, where I had one of the classic Paris breakdowns, though genuine enough as it chanced. Landed in the suburbs, got a mechanic to work, and had time for a delicious lunch at a small workmen's restaurant. Treated myself to a half bottle of sound Medoc and a villainous cigar with the coffee, and got back just in time to find them testing my motor. The rest of the trip was uneventful. I arrived here in the early afternoon and installed myself for the night in these superb quarters.

This is the classic hour for French pilots to foregather in excited groups to expliquer les coups — an expressive phrase for which I can recall no exact equivalent in English. They (or rather

we) spend a full hour every evening in telling just how it was done, or why it was not done, and so on, *ad infinitum.* Snatches of characteristic talk reach your ears — (I will attempt a rough translation). "You poor fish! why did n't you dive that time they had us *bracketed?* — I had to follow you and I got an éclat as big as a dinner-plate within a foot of my back."

"Did you see me get that Boche over the wood? I killed the observer at the first rafale, rose over the tail, and must have got the pilot then, for he spun clear down till he crashed."

"See the tanks ahead of that wave of assault? Funny big crawling things they looked — that last one must have been en panne — the Boches were certainly bouncing shells off its back!"

"Raoul and I found a troop of Boche cavalry on a road — in khaki, I swear. Thought they were English till we were

within one hundred metres. Then we gave them the spray — funniest thing you ever saw!"

"Yes — I'll swear I saw some khaki, too. Saw a big column of Boche infantry and was just going to let 'em have it when I saw horizon-blue guards. Prisoners, of course."

You can imagine pages of this sort of thing — every night. At the bar we have a big sign: "Ici on explique les coups." At the mess, another: "Défense d'expliquer les coups ici." There are limits.

As mess-officer I have been going strong of late — nearly every day one or two or three "big guns" (grosses huiles, the French call them) of aviation drop in to lunch or dinner. Down from a patrol at 10.30, and scarcely out of the machine, when up dashes our cook, knife in one hand and ladle in the other, fairly boiling over with anxiety. "Commandant

X—— and his staff are coming to lunch — I can't leave the stove — what on earth shall we do?"

An hour and a half. Just time for the cyclist to buzz down to the nearest town for some extra hors d'œuvres, salad, and half a dozen old bottles. In the end everything runs off smoothly, and when the white wine succeeds the red, the usual explication des coups begins — highly entertaining inside stuff, from which one could cull a whole backstairs history of French aviation. It has been my privilege to meet many famous men in this way — great "aces" and great administrators of the flying arm; men whose names are known wherever European aviators gather. I wish I could tell you half the drolleries they recount, or reproduce one quarter of the precise, ironical, story-telling manner of a cultivated Frenchman.

A captain who lunched with us to-

day, bearer of an historic name, was recently decorated (somewhat against his will) for forcing a Boche to land in our lines. The truth is that in the single combat high above the lines, the captain's motor failed and he coasted for home, maneuvering wildly to escape the pursuing Hun's bullets. A few kilometres within our lines the German motor failed also, and down they came together — the Boche a prisoner, the Frenchman covered with not particularly welcome glory. Not all our guests knew the story, and one high officer asked the captain how he maneuvered to drive down the Boche. "Oh, like this," erratically said the captain, illustrating with frantic motions of an imaginary stick and rudder.

"But the Boche — ?" inquired the other, puzzled, "how did you get him down — where was he?"

"Ah, the Boche; he was *behind* me," answered the captain.

Another officer, recently promoted to a very high position in the aviation, is a genuine character, a "numero" as they say here. He recently spent many hours in perfecting a trick optical sight, guaranteed to down a Boche at any range, angle, or speed. He adored his invention, which, he admitted, would probably end the war when fully perfected, and grew quite testy when his friends told him the thing was far too complicated for anything but laboratory use. At last, though he had reached a non-flying rank and had not flown for months, he installed the optical wonder on a single-seater and went out over the lines to try it out. As luck would have it, he fell in with a patrol of eight Albatrosses, and the fight that followed has become legendary. Boche after Boche dove on him, riddling his plane with bullets, while the inventor, in a scientific ecstasy, peered this way and that through his sight, adjusting

set-screws and making hasty mental notes. By a miracle he was not brought down, and in the end a French patrol came to his rescue. He had not fired a shot! At lunch the other day some one asked what sort of a chap this inventor was, and the answer was so exceedingly French that I will reproduce it word for word: "He detests women and dogs; he has a wife he adores, and a dog he can't let out of his sight." A priceless characterization, I think, of a testy yet amiable old martinet.

One of my friends here had the luck, several months ago, to force a Zeppelin to land. A strange and wonderful experience, he says, circling for an hour and a half about the huge air-monster, which seemed to be having trouble with its gas. He poured bullets into it until his supply was exhausted, and headed it off every time it tried to make for the German lines. All the while it was settling,

almost insensibly, and finally the Hun crew began to throw things out — machine-guns, long belts of cartridges, provisions, furniture, a motley collection. In the end it landed intact in our lines — a great catch. The size of the thing is simply incredible. This one was at least ninety feet through, and I hesitate to say how many hundred feet long.

Three more of our boys gone, one of them my most particular pal. Strange as it seems, I am one of the oldest members of the squadron left. We buried Harry yesterday. He was the finest type of young French officer — an aviator since 1913; volunteer at the outbreak of war; taken prisoner, badly wounded; fourteen months in a German fortress; escaped, killing three guards, across Germany in the dead of winter, sick and with an unhealed wound; back on the front, after *ten days* with his family, although he need never have been a combatant again.

A charming, cultivated, witty companion, one of the most finished pilots in France, and a soldier whose only thought was of duty, his loss is a heavy one for his friends, his family, and his country. For a day and a night he lay in state in the church of a near-by village, buried in flowers sent by half the squadrons of France; at his feet his tunic ablaze with crosses and orders. It was my turn to stand guard the morning his family arrived, and I was touched by the charming simple piety of the countryfolk, who came in an unending stream to kneel and say a prayer for the soul of the departed soldier. Old women with baskets of bread and cheese on their arms brought pathetic little bouquets; tiny girls of seven or eight came in solemnly alone, dropped a flower on Harry's coffin, and knelt to pray on their little bare knees. The French peasants get something from their church that most of us at home seem to miss.

At last the family came — worn out with the long sad journey from their château in middle France. Harry's mother, slender, aristocratic, and courageous, had lost her other son a short time before, and I was nearer tears at her magnificent self-control than if she had surrendered to her grief. Her bearing throughout the long mass and at the grave-side was one of the finest and saddest things I have ever seen in my life. Poor old Harry — I hope he is in a paradise reserved for heroes — for he was one in the truest sense of the word.

I got absolutely lost the other day, for the second time since I have been on the front. I was flying at about nineteen thousand feet, half a mile above a lovely sea of clouds. I supposed I was directly over the front, but in reality there was a gale of wind blowing, drifting me rapidly "chez Boche." Three thousand

feet below, and miles to the northeast, a patrol of German scouts beat back and forth, a string of dots, appearing and disappearing among the cloudy peaks and cañons. Too strong and too far in their lines to attack, I was alternately watching them and my clock — very cold and bored. Suddenly, straight below me and heading for home at top speed, I saw a big Hun two-seater, with enormous black crosses on his wings.

At such a moment — I confess it frankly — there seem to be two individuals in me who in a flash of time conclude a heated argument. Says one, "You're all alone; no one will ever know it if you sail calmly on, pretending not to see the Boche."

"See that Boche," says the other; "you're here to get Germans — go after him."

"See here," puts in the first, who is very clever at excuses, "time's nearly

up, petrol's low, and there are nine Hun scouts who will drop on you if you dive on the two-seater."

"Forget it, you poor weak-kneed boob!" answers number two heatedly. "Dive on that Hun and be quick about it!"

So I dived on him, obeying automatically and almost reluctantly the imperious little voice. With an eye to the machine-gunner in the rear, I drove down on him almost vertically, getting in a burst point-blank at his port bow, so to speak. Pushing still farther forward on the stick, I saw his wheels pass over me like a flash, ten yards up. Pulled the throttle wide open, but the motor was a second late in catching, so that when I did an Immelman turn to come up under his tail, I was too far back and to one side. As I pulled out of the upside-down position, luminous sparks began to drive past me, and a second later I caught a glimpse of the goggled Hun observer

leaning intently over his cockpit as he trained his gun on me.

But beside old Slapping Sally his machine was as a buzzard to a falcon; in a breath I was under his tail, had reared almost vertically, and was pouring bullets into his underbody. "You will shoot me up, will you?" I yelled ferociously — just like a bad boy in a back-yard fight. "Take that, then — " at which dramatic instant a quart of scalding oil struck me in the face, half in the eyes, and half in my open mouth. I never saw the Boche again, and five minutes later, when I had cleaned my eyes out enough to see dimly, I was totally lost. Keeping just above the clouds to watch for holes, I was ten long minutes at one hundred and thirty miles per hour in getting to the lines, at a place I had never seen before.

Landed at a strange aerodrome, filled Sally up, and flew home seventy-five

miles by map. As usual, every one had begun the old story of how I was not a bad chap at bottom, and had many noble qualities safely hidden away — when I strolled into the bar. Slight sensation as usual, tinged with a suspicion of mild disappointment.

Almost with regret, I have turned faithful old Slapping Sally over to a newly arrived young pilot, and taken a new machine, the last lingering echo of the dernier cri in fighting single-seaters. I had hoped for one for some time, and now the captain has allotted me a brand-new one, fresh from the factory. It is a formidable little monster, squat and broad-winged, armed to the teeth, with the power of two hundred and fifty wild horses bellowing out through its exhausts.

With slight inward trepidations I took it up for a spin after lunch. The thing is terrific — it fairly hurtles its way up through the air, roaring and snorting and

trembling with its enormous excess of power. Not half so pleasant as Sally, but a grimly practical little dragon of immense speed and potential destructiveness. At a couple of thousand feet over the field, I shut off the motor and dived to try it out. It fairly took my breath away — behind my goggles my eyes filled with tears; my body rose up in the safety-belt, refusing to keep pace with the machine's formidable speed. In a wink, I was close to the ground, straightened out, and rushing low over the blurred grass at a criminal gait — never made a faster landing. It is a tribute to man's war-time ingenuity, but, for pleasure, give me my old machine.

The psychology of flying would be a curious study, were it not so difficult to get frankly stated data — uninfluenced by pride, self-respect, or sense of morale. I only know my own feelings in so far as they represent the average single-seater

pilot. Once in the air, I am perfectly contented and at home, somewhat bored at times on dull days, or when very high and cold. On the other hand, I have never been strapped in a machine to leave the ground, without an underlying slight nervousness and reluctance; no great matter, and only an instant's mental struggle to overcome, but enough perhaps to prevent me from flying the very small and powerful machines, for pleasure, after the war. I often wonder if other pilots have the same feeling — it's nothing to be ashamed of, because it does not, in the slightest, prevent one's doing one's duty, and disappears the moment one is in the air. I can give you its measure in the fact that I always prefer, when possible, to make a long journey in my machine, to doing it in the deadly slow wartime trains. Still, it's a choice of evils. It is hard to give reasons, but certainly flying is not an enjoyable sport, like

riding or motoring, once the wonder of it has worn off; simply a slightly disagreeable but marvelously fast means of transport. The wind, the noise, the impossibility of conversation, the excessive speed — are all unpleasant features. These are partially redeemed by the never-ceasing wonder of what one sees. One's other senses are useless in the air, but what a feast for the eyes! Whole fruitful domains spread out beneath one, silvery rivers, smoking cities, perhaps a glimpse of the far-off ragged Alps. And when, at eighteen or twenty thousand feet, above a white endless sea of clouds, one floats almost unconscious of time and space in the unearthly sunshine of the Universe, there are moments when infinite things are very close.

THE END

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